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INTRASTATE DIFFERENCES
IN WORKERS' COMPENSATION COSTS
OCTOBER 1986 CLOSED CASE STUDY

by

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DRAFT FINAL REPORT

submitted to

Bureau of Workers' Disability Compensation
Michigan Department of Labor

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INTRASTATE DIFFERENCES IN WORKERS' COMPENSATION COSTS

REPORT III: OCTOBER 1986 CLOSED CASE STUDY

PURPOSE OF STUDY

The Michigan Workers' Disability Compensation Act was passed in 1912 to provide a means to maintain workers during periods of disablement resulting from their employment and to rehabilitate them so that they could resume their employment. The Michigan system experienced a major overhaul in the late 1960s, and then was not substantially modified again until 1980. The workers' compensation system became a major political issue in the late 1970s as business groups complained bitterly about the level of workers' compensation costs in Michigan.¹

A thorough empirical review was made of the system in 1978 and published in Workers' Compensation System in Michigan: A Closed Case Survey by the W.E. Upjohn Institute for Employment Research in 1982. This study attempted to provide a dispassionate observation of the workers' compensation system through a description of the cases that were in the system. At the time, there was very little empirical information available about the workers' compensation system and the feeling was that the lack of adequate information made it more difficult to negotiate needed changes in the system. During the statutory reforms of the early 1980s the information in the Upjohn Institute study was frequently referred to during the

¹See Hunt (1978) for a discussion of the environment at that time.

modification of a number of structural elements of the workers' compensation system.

It is the goal of this study to present an empirical description of the Michigan workers' compensation system as of 1986 which will enable the comparison of the operation of the current system with the 1978 system in order to measure the impact of the policy changes implemented in the early 1980s. As in 1978, this is accomplished by describing the features of the cases that are coming out of the system, the "closed" cases. Observing the amount of compensation, the timing of compensation, and other observable dimensions of closed workers' compensation cases cannot completely capture the experience of being disabled by a workplace accident, or of being subject to the workers' compensation bureaucracy, of course. However, it is possible to determine whether delays in securing compensation are excessive, whether income replacement is more or less adequate, and other such questions of policy interest. While they are not the whole truth, these simple facts can serve as indicators of the adequacy of the system.

THE CLOSED CASE SAMPLE

To obtain an overview of current workers' compensation cases, a "slice-in-time" sample was abstracted from the on-line database (COMPMAS^T) maintained by the Bureau of Workers' Disability Compensation (BWDC) of the Michigan Department of Labor.² The COMPMAS^T database consists of selected administrative information about every workers' compensation case that has

²Sampling procedures were designed to maximize comparability with the 1978 closed case sample, subject to the requirements of the COMPMAS^T database.

had BWDC involvement since 1983 when the system was implemented.³ The Upjohn Institute abstracted the information about cases closed in October 1986. This involved reviewing 655,949 cases from the total database and selecting the 6,265 compensated cases (excluding medical only) which closed in October of 1986. October was chosen for comparability to the previous study conducted on cases closed in October of 1978.

Closed cases are cases which are no longer in "active" payment status, nor are they awaiting further administrative action. Outcomes of closed cases include where the individual claimant: (1) has recovered and returned to work; (2) has recovered but for some reason not returned to work; (3) has received a lump-sum payment for the disability and agreed to drop the issue of further compensation (generally referred to as a compromise and release agreement, but in Michigan known as a redemption agreement); (4) withdrew the claim or had benefits denied in an administrative procedure and is therefore no longer eligible; or (5) has died. Once a case has been officially closed or "retired" the chance of it reopening is slight. For the closed case sample drawn for this study, less than 2% had reopened at the time of our receiving the data two years after closure in September of 1988.

The big advantage of using a closed case sample design is the certain knowledge of what has happened with a case - a positive beginning, an administrative process, and a conclusion.⁴ The disadvantage, of course, is the lack of timeliness for long-term disability or heavily litigated cases.

³Subsequent to sample selection, a purge of COMPMASST eliminated the older closed cases from the on-line system.

⁴See Hunt (1982), chapter 1 for a more complete discussion of these sampling issues.

Such cases at the time of closure do not represent current policy or procedure. On the other hand, currently active long-term cases which began under recent workers' compensation policies are not included because they have not yet closed. However, the predominance of short-term, recently closed cases in the sample, as well as the fact that the bulk of closed litigated cases had their origins after the reforms of the early 1980s made the closed case design a useful approach for this study.

WORKERS' COMPENSATION FORMS STRUCTURE

Administratively, workers' compensation cases typically begin with an employer filing a Basic Report of Injury (Form 100) soon after the injury or illness is made known. In a significant minority of cases, the first notice arises through the injured employee filing a Petition for Hearing (Form 104) with the Bureau if he or she feels the case is not being attended to properly by the employer or the insurance carrier. Approximately 14 other BWDC forms may follow, depending on the complexity of the case. In the COMPMAS^T database each form is entered as a separate record, which can then be compiled into "cases" by the universal identifier on each form, the combination of the employee's Social Security number and the date of the injury.

Following is a list of the forms extracted from COMPMAS^T for the October 1986 sample, and the total number of records per form which constituted the 6265 cases (unique SSN and DOI) involved.

BUREAU OF WORKERS' DISABILITY COMPENSATION FORMS

<u>FORM</u>	<u>FORM NAME</u>	<u>OBS</u>	<u>CASES</u>
F001	MASTER CASE FILE	6,265	6,265
F100	BASIC INJURY REPORT	5,798	5,783
F101	COMPENSATION BEGAN	8,009	5,766
F102	COMPENSATION STOPPED	8,288	6,025
F103	ANNUAL REPORT OF COMP.	798	355
F104	PETITION FOR HEARING	887	719
F105	AMENDMENT TO F104	8	7
F106	FATALITY	0	0
F107	NOTICE OF DISPUTE	920	761
FL26	ADVANCE PAYMENT	1	1
F113	REDEMPTION - SINGLE EMP.	106	104
FR13	REDEMPTION - MULT. EMP.	389	385
FC13	CONTINUATION FR13	78	58
F200	DECISION	427	382
FC20	CONTINUATION OF F200	4	4
F500	CONTESTED CASE INDEX	710	672
F501	APPEAL	<u>100</u>	<u>76</u>
TOTAL FORMS WRITTEN		26,523	6,265

In order to organize the information available through these forms, a number of decisions had to be made regarding such concerns as which value to keep when the variable changed value over time, and how to manage multiple values for a single variable within a case. The major research interests were the initial status of the participants, the administrative treatment during the life of the case, and the final compensation outcomes. Accordingly, no attempt was made to retain all the details for each case.

Since one of the purposes of this study was to identify factors important in determining the incidence of claims, it was determined that the initial value for each variable was important to establish the initial conditions of the case. In addition, since cases are classified by their final resolution and this final resolution often depends on the claimant's status at the time of closure, the final value for variables whose values changed over time was also considered important. Some examples of

first/last variables (variables with multiple values or whose values are likely to change over time) are number of dependents, weekly compensation rate, employee's combined weekly earnings, and the dates of specific BWDC forms. In addition, retention of first and last values for some variables (especially dates) allowed us to estimate total duration for these variables. However, it is inevitable that some detail was discarded, and in particular cases it is possible that important facts have been missed.

Another type of variable measured subsets of the whole, such as specific spells of disability within the total duration or the amount of each payment type within a total award. Retaining these items allowed for review of the steps in the process which constitute the final outcome of the case. Finally, there were variables which had multiple values, all of which needed to be preserved, such as insurance carrier and employer.

In addition, there were some important case variables that are not available in the COMPMAS^T system, notably including the nature of the injury and the part of body affected. To facilitate maximal comparability with the 1978 database, and for the sake of completeness, a separate sub-sample was drawn from the October 1986 closed cases. A random sample, stratified by resolution type, was drawn and the original file was pulled and reviewed by project personnel. Relevant variables that were not available from COMPMAS^T were abstracted from these cases and recorded in a supplemental database. The major contribution of the supplemental database is to the description of the injury type, the retiree status of claimants, and the activity of the special funds in the Michigan workers' compensation system.

The completed analytical database contains most of the detail available on workers' compensation cases closed in October of 1986. Every effort has

been made to insure that the data are correct and logically consistent. Where details have been omitted, this should not affect the overall sample statistics or comparisons between broad groups of cases. The samples should adequately represent the "output" of the Michigan workers' compensation system late in 1986.

PART I. DEPENDENT VARIABLES

Before beginning the formal analysis of the 1986 closed case sample, it is worth investing some effort in understanding the major variables that will be included in the analysis. This section will introduce each of these dependent variables in a conceptual way and present the distribution of the variable in the sample. Later, these same items will appear as dependent variables in the analysis of the Michigan workers' compensation case flow.

A. LITIGATION STATUS

An unlitigated workers' compensation case is one in which the employee is injured, the employer recognizes and acknowledges the injury within a short period of time, and the insurer⁵ proceeds to pay the employee income replacement benefits. These cases will have any combination of the first four BWDC forms - F100, F101, F102 and possibly an F103 if the case persisted through the end of a calendar year. It is possible for these cases to continue to receive benefits for many years, but the characteristic of an unlitigated workers' compensation case is that it does not undergo further administrative procedure. In fact, in Michigan, the Bureau does not intervene in such cases in any way unless errors are detected, or the case extends long enough to trigger a review for vocational rehabilitation. In the October 1986 sample, 5488 (87.6%) of the total sample are unlitigated cases.⁶

⁵We will use the term "insurer" to refer to the party who carries the liability for the claim, whether a self-insured employer or a workers' compensation insurance carrier.

⁶Recall that medical only cases were excluded from the sample.

If the employer and/or carrier and the employee are not in agreement as to compensation, one party or the other (usually the employee) requests a hearing from the Bureau and the case enters the litigation process. At this point another 12 BWDC forms may appear in any combination, and frequently they will appear repeatedly during this litigation process. Originally, it was thought that a case would be classified as a litigated case if either an F104 Petition for Hearing was filed by the employee or an F107 Notice of Dispute was filed by the employer. However, to prevent possible financial penalties for late payment many employers are now customarily filing an F107, even if it is likely that they will accept liability for paying the claimant. The practice is so common (out of the 920 F107 filed, only 20 actually initiated litigated cases) that unless higher level forms are also included, a case having the unlitigated forms and an F107 is not considered to be a litigated case. To be considered a litigated case the case must have one of the following forms: F104, F113, FR13, F200 or F501.⁷ The distribution of litigated and unlitigated cases in the sample is as follows:

Table I.1

UNLITIGATED	5,488	87.6%
LITIGATED	<u>777</u>	<u>12.4%</u>
TOTAL SAMPLE	6,265	100.0%

B. CASE TYPE

Within the litigated case population there is great variety. Because the administrative burden differs considerably depending on the level of

⁷The F105, FL26, FC13, and FC20 continuation forms would also have constituted litigation, however, there were so few filed in the sample and they provided so little additional information, it was felt they could be safely ignored.

services required and because the timeliness issue becomes more of an issue the longer the litigation, the 777 litigated cases in the sample were subdivided into categories reflecting administrative complexity based on the presence of specific forms.

A case with an F104 (employee petition for hearing) but none of the other litigation forms was classified as simply CONTESTED. A case having an F113 or FR13 (redemption form) with or without an F104, but not having the remaining litigation forms was classified as REDEEMED. Michigan uses the term redemption or redemption of liability to refer to a compromise and release settlement. Such cases are closed with the payment of a lump-sum to the claimant in exchange for the release of the employer from further liability in the case. Thirdly, a case with an F200 (decision form) with or without the preceding two litigation forms, but not having an F501 (appeal form) was labeled DECISION. These are the cases that are decided by the Workers' Compensation Magistrates. Magistrates write orders implementing their decisions and these are enforceable at law. And finally, cases with an F501, with or without any of the preceding forms were labeled APPEALED. Such cases usually have had a Magistrates's decision earlier, and the appeal is from that decision to a higher authority. Following is a statistical breakdown of the above case types:

Table I.2

<u>CASE TYPE</u>	<u>N</u>	<u>%</u>
LITIGATED CASES		
CONTESTED (F104)	10	1.3%
REDEEMED (F113)	348	44.8%
DECISIONS (F200)	343	44.1%
APPEALED (F501)	<u>76</u>	<u>9.8%</u>
	777	100.0%

This hierarchical classification of "case types" will be used throughout the analysis as a way of sorting litigated cases according to the administrative burden they impose on the workers' compensation system.

C. OUTCOME

The degree of administrative involvement as described above is not necessarily reflective of the final compensation status of the case. It is possible for a case in litigation to end up receiving (1) weekly income replacement benefits, (2) a lump-sum redemption settlement, or (3) no compensation at all. The latter are referred to as washouts. All unlitigated cases in the sample received weekly income replacement benefits, since "medical-only" cases were excluded. In addition, seven litigated cases in the original sample (0.11%) received fees but assigned nothing to the plaintiff for income replacement. Since there were so few, and they resembled the already excluded "medical only" cases, it was decided to regard these seven cases as missing on outcome.

There are also a number of litigated cases that received both weekly compensation and a lump-sum payment. Generally, these are cases that have become controverted at some point after the original (weekly) benefit entitlement has been established. Thus the case will show a period of weekly benefit payments, followed by a dispute, with a redemption settlement concluding the case. Following is the distribution of outcomes in the analytical sample.

Table I.3

<u>OUTCOME</u>	<u>N</u>	<u>%</u>
WEEKLY ONLY	5,497	87.8%
REDEMPTION ONLY	249	4.0%
WEEKLY PLUS REDEMPTION	232	3.7%
WASHOUT	<u>280</u>	<u>4.5%</u>
 TOTAL	 6,258	 100.0%
 MISSING (FEES ONLY)	 7	 0.1%

D. COMPENSATION COSTS

Payments to claimants are classified in considerable detail by the Bureau according to the intended purpose of the funds and as an indication of the approximate duration of the payment(s). In this report, compensation will most often be represented by the total amount, or by the broad subcategories of redemptions, weekly payments, or both. However, at times interest will center on specific aspects within the broader payment categories. By separating the various payment types it is also possible to isolate the proportion of each payment which goes to the claimant (net), independent of the amount reserved for lawyers, court costs, and past or future medical costs.

Public reports about workers' compensation payments tend to be presented in terms of the total amount, without mention of the allocation of the monies. This creates the appearance that individuals are receiving large sums. One of the goals of this report is to clarify just how much claimants "take home" after deduction of the portions of the awards reserved for the system costs. The BWDC subcategories by payment type are as follows:

VOLUNTARY WEEKLY

Total and Temporary
 Total and Permanent
 Specific Loss
 Partial
 Open Award
 Closed Award
 Stipulated Agreement
 A combination of the above
 Voluntary - Other

REDEMPTION

Plaintiff portion
 Attorney fees
 Litigation fees
 Medical fees
 - past bills due
 - reserved for future medical
 Litigated - Other

A total of \$24,540,200 in indemnity was paid to workers' compensation cases closing in October 1986, averaging almost \$3,917 a case. Excluding the 280 cases that received nothing adjusts this average to \$4,100 per case. Cost in this sense is what the insurance companies and/or employers paid out in indemnity to the claimant, plus past, current, or future medical bills, and legal fees. Compensation costs reported here do not include administrative costs for the employer or insurer, nor for the Bureau of Workers' Disability Compensation. Other benefit costs paid by insurers such as medical or rehabilitation costs are also not included. Of course, the non-recouped wages or other costs incurred on the part of the injured employee as a result of the disability are not included either.

Table I.4

<u>TYPE OF PAYMENT</u>	<u>TOTAL SAMPLE</u>	<u># CLAIMANTS</u>	<u>AVERAGE</u>
Total Amount	\$24,540,200	5,985	\$ 4,100
Weekly Benefits	15,880,811	5,729	2,772
Plaintiff portion of redemption	5,194,096	481	10,799
Fees	3,465,293	714	4,853

Weekly benefits accounted for 65% of all compensation costs. Fully 91% of the sample received weekly benefits; 96% of this group received only weekly benefits, the other 4% received a redemption payment in addition. Of the 35% of all costs which are not weekly benefits, 60% are lump sum payments going to the claimant, and the remaining 40% are associated fees (including medical costs, legal fees, and other fees).

E. REPLACEMENT RATES

Since workers' compensation was established as an income replacement system, the indemnity paid to the injured worker (net) will be compared to the claimant's average weekly wage in an effort to describe how well this goal is achieved. This will be more difficult in the case of litigated claims, but through the use of assumptions about earnings and timing of disability, approximations to actual replacement rates can be made for these cases as well.

Prior to 1982 workers' compensation income replacement benefits were calculated at two-thirds of the claimant's gross weekly earnings, subject to both maximum and minimum benefit levels. For instance, in 1981 the minimum benefit level was set at \$144 per week and the maximum benefit at up to \$210 per week (calculated at two thirds of the state average weekly wage), varying with the number of dependents. Statutory changes enacted in 1980 and taking effect in 1982 modified this formula, setting the benefit standard to 80% of the employee's "spendable" or "take home" earnings, which is a function of the gross wage and federal and state tax deductions, including allowance for withholding due to the number of dependents.

Further, the 1980 reforms eliminated the minimum benefit standard for general disability cases and raised the maximum benefit to 90% of the state's average weekly wage (an increase of approximately one-third). The result is the maximum benefit rate for cases with injury dates in 1986 was \$375 per week. Older cases, of course, will have lower maximums reflecting the state average weekly wage at the time of the injury, as well as policies in effect at the time the case is filed. For a case in weekly payment status, adjustments are made to the weekly compensation rate when federal or state withholding rates change, or when the number of dependents change for the injured worker.⁸

Wage Replacement

Replacement rates can be reviewed from a number of perspectives. The most obvious is to compare the average weekly wage before the disability with the claimant's weekly workers' compensation benefit rate. This approach accommodates the differences in wage levels throughout the years as well as modifications to the benefit rate formula. The most common benefit rate to wage ratio for all cases receiving weekly benefits was between 60 and 70 percent.⁹ Combining all cases closed in October 1986 that had

⁸There are also inflation adjustments for permanent and total cases and partial inflation adjustments for all claims with injury dates before January 1, 1980.

⁹Note that claimants whose cases closed in 1986 could have benefit entitlements at either two-thirds of gross or 80 percent of spendable, depending on their date of injury.

received weekly benefits, the median for the total sample weekly benefit replacement rate was 62.1 percent.¹⁰

Table I.5

<u>REPLACEMENT RATE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>
less than 40%	280	4.9%
40-50%	318	5.6%
50-60%	1,394	24.6%
60-70%	3,322	58.7%
70-80%	309	5.5%
over 80%	<u>36</u>	<u>0.6%</u>
TOTAL	5,659	100.0%
MISSING	<u>606</u>	
TOTAL SAMPLE	6,265	

The average replacement rate will obviously be affected by the number of cases whose claimants earn at or above the state average weekly wage. The greater the proportion above the state average the poorer the comparison between average wage and compensation rate, since some compensation rates will be constrained by the maximum benefit. Claimants' average weekly wage for the overall sample was running at 98.74% of the state average weekly wage when year of injury was taken into consideration.

Income Replacement

A second approach to wage replacement, considering that not all cases received weekly benefits, is to compare the claimant's net compensation to the estimated total amount the claimant would have earned during the duration of disability had he or she been working. For the purposes of this exercise, it is assumed the claimant is not earning any wage during the

¹⁰Only 3.0 percent of cases closed in October 1986 had injury dates before January 1, 1982.

period of disability, and that the wage would have remained constant in the absence of the disability. This method includes more of the litigated cases, which often have no weekly benefits, yet still receive compensation. The average income replacement figure comes out to be substantially lower than under the wage replacement method, with a median of 39.6 percent.

Table I.6

<u>INCOME REPLACEMENT RATE</u>	<u>NET COMPENSATION TO POTENTIAL EMPLOYEE EARNINGS</u>	
	Number	Percent
00 - 20%	1,710	29.7
20 - 40%	1,163	20.2
40 - 60%	1,302	22.6
60 - 80%	855	14.9
80 - 100%	722	12.6
TOTAL	5,752	100.0%
MISSING	<u>513</u>	
TOTAL SAMPLE	6,265	

Presumably, the lower replacement rate for this more global measure reflects the influence of the litigated cases. A more thorough analysis of replacement rates, for both litigated and unlitigated cases will lend more meaning to the above numbers. This analysis will be presented in the comparative sections below.

PART II. INDEPENDENT VARIABLES

The Michigan workers' compensation benefit system is very dynamic. Each case involves (a) an injured worker, (b) his or her employer or employers and the employers' workers compensation insurance provider, plus (c) policies and procedures within the Bureau of Workers' Disability Compensation. In an attempt to understand the outcomes and the effects of the system, the dependent variables reviewed above (litigation status, case typology, outcome, costs, and wage and income replacement rates) will be analyzed in light of their relationship with the characteristics of the worker, the insurer, and the system itself. These independent variables will be introduced in this section and used with the dependent variables in the next chapter.

A. CLAIMANT CHARACTERISTICS

The first question is who uses the workers' compensation system? Who are these injured workers? How do the number of injured workers using the system compare to other measures of the number of injuries sustained throughout the state for a comparable period of time? Is there any difference between those likely to become involved in litigated cases versus those who remain at the voluntary payment level? Are certain employee characteristics more often associated with higher awards, lower awards, or degree of litigation? Do employees in certain regions of Michigan file claims more frequently? Or litigate more frequently? Or get redemptions more frequently? What implications might any of these outcomes have for employers, insurance companies, or Bureau policies?

The study done by the W.E. Upjohn Institute for Employment Research on 1978 cases (Hunt, 1982) found the following claimant characteristics had varying degrees of influence on the level of litigation, outcome and cost of workers' compensation cases:

- A. location within Michigan
- B. age of claimant at case opening
- C. number of dependents at case opening
- D. claimant's average weekly wage
- E. previous compensation for case
- F. claimant fatality
- G. type of injury and part of body injured
- H. bodily injury versus occupational disease
- I. hospitalization for injury.

Gender was also reviewed in the 1978 study but found not to be significant.

This study will review some of the above characteristics with some slight modifications. As mentioned earlier, data regarding type of injury, part of body and hospitalization were not available through COMPMAS. Therefore, type of injury and part of body information were collected from a subsample of about 600 workers' compensation cases through manual review of case folders. Hospitalization information is no longer consistently collected and was therefore not available. Minimal space will be dedicated to analysis of fatalities given their rarity in the sample.

NATURE OF INJURY

Table II.1 is drawn from the supplementary sample and it shows the nature of the injury as recorded in the case file. Generally, this information was taken from the originating form, either the employer's report of injury or the claimant's petition for hearing. It shows that the major share of compensable injuries in Michigan are due to strains and

sprains, over 40 percent. Bruises, cuts, and fractures each account for about 10 percent of compensable injuries. Multiple injuries, inflammation type injuries, hernias, and other injuries each account for between 5 and 10 percent.

Table II.1

<u>INJURY</u>	<u>PERCENT</u>
AMPUTATION	0.4
BRUISE	11.1
BURN	1.1
CUT	9.0
DISLOCATION	1.4
FRACTURE	8.8
HERNIA	4.8
INFLAMMATION	7.2
MULTIPLE	7.5
STRAINS	43.4
OTHER	4.9
UNCLASS	0.5

TOTAL	100.0

Table II.2 reports the part of body involved in the injury. Back injuries are the single biggest group, with over one-fourth of all compensable injuries involving the back. Injuries to the extremities are quite common, with leg or ankle injuries accounting for 16 percent, hand or finger injuries for 14 percent, and arm or wrist injuries for 9 percent of the total. About one-sixth of all compensable injuries involve multiple parts of the body. Relatively small numbers of cases involve abdominal injuries, foot injuries or disabilities involving body systems.

Table II.2

<u>PART OF BODY</u>	<u>PERCENT</u>
ABDOMEN	3.6
ARM/WRIST	9.4
BACK	26.7
BODY SYSTEM	1.4
FOOT/TOE	2.3
HAND/FINGER	14.6
HEAD/NECK	2.9
LEG/ANKLE	16.3
MULTIPLE	16.5
OTHER TRUNK	6.2
OTHER	0.1

TOTAL	100.0

LABOR FORCE STATUS

A major issue at the time of the 1978 closed case survey was the number of retirees collecting workers' compensation benefits in Michigan. This problem was attacked with a presumption in the statute that workers who are voluntarily retired are not suffering wage loss due to disability and with a comprehensive program of benefit coordination, including private pensions and social security payments. Table II.3 indicates that retirees are no longer a problem in the Michigan workers' compensation system.

Table II.3

<u>LABOR FORCE STATUS</u>	<u>PERCENT</u>
DISABLED	0.7
UNEMPLOYED	2.5
RETIRED	1.2
DECEASED	1.0
EMPLOYED	83.0
UNKNOWN	11.7

TOTAL	100.0

While it is impossible to make authoritative determinations of the labor force status of all claimants at the time of case closing from the administrative record, reasonably certain judgments were made in nearly 90 percent of the supplementary sample cases. Only 1.2 percent of this sample appeared to be retired at the time of case closing in 1986. About twice that number, 2.5 percent of the sample, were unemployed at closing. Over 80 percent of all claimants had returned to work. If the unknowns were ignored, the proportion that has returned to work would be 94 percent.

It is worth commenting on the proportions that were judged to be disabled at the time of closure, or who had died. Since a major share of litigated cases involved a redemption settlement, it might be anticipated that a larger share of the claimant population would still be disabled at the time of closure. Presumably, the lump-sum payment and the redemption of liability reflect some permanent disability. Thus the number of such cases seems rather low, given that the full sample of 1986 closed cases showed about 4.0 percent of all claims were pure redemptions.

On the other hand, the only place where a continuing disability would specifically have been addressed in the administrative record would be in the medical reports or trial transcript. In redemption cases trial transcripts are typically not included in the files. Thus, it is logical to assume that the number of claimants with continuing disability at the time of case closure is underestimated.

For claimants who have died, there is no such bias. If a claimant drawing weekly benefits expires, there is an automatic notification to the insurer. In fact, it could be that the death triggered the administrative closure of the case. It is also to be expected that such a major factor

would have been noted in the file for redemption cases. Thus there is little question about underestimating the number of fatalities among the supplementary case population.

LOCATION OF CLAIMS

Region is a descriptive variable for both claimants and employers. It is possible that workers' compensation administrative practices vary by location, since each workers' compensation magistrate has a certain amount of discretion, and the practices of the local bar may vary as well. However, except for showing the association between variables, it will be impossible to specify in what ways the factors interact.

Every Michigan county but two, Keweenaw and Presque Isle, was represented in the sample. The number of cases per county ranged from 1 in Luce to 1,659 in Wayne, roughly comparable to the level and types of employment in these varying counties. For descriptive purposes, the 83 counties were grouped into Standard Metropolitan Statistical Areas (SMSA's) or into 7 regions: Detroit Metro, Lansing Area, Kalamazoo-Battle Creek, Ann Arbor-Jackson, Grand Rapids-Muskegon, Saginaw-Flint, and Balance of the State. The distribution of claims by SMSA's is as follows:

Table II.4

WORKERS' COMPENSATION CLAIMS AND EMPLOYMENT DISTRIBUTION
BY MICHIGAN COUNTIES/GROUPED BY 1980 SMSAs

SMSA/COUNTY	WORKERS' COMPENSATION CLAIMS			1984-1986
	N	PERCENT STATEWIDE	PERCENT FOR SMSA	% OF STATE EMPLOYMENT
DETROIT METRO (6)	3099	49.5		46.8
Lapeer	48	.8	1.5	
Livingston	47	.8	1.5	
Macomb	576	9.2	18.6	
Oakland	712	11.4	23.0	
St. Clair	57	.9	1.8	
Wayne	1659	26.5	53.5	
ANN ARBOR-YPSILANTI (1)	188	3.0		3.6
Washtenaw	188	3.0	100.0	
BATTLE CREEK (2)	114	1.8		1.9
Barry	18	.3	15.8	
Calhoun	96	1.5	84.2	
FLINT (2)	262	4.2		5.1
Genesee	235	3.8	89.7	
Shiawassee	27	.4	10.3	
GRAND RAPIDS (2)	526	8.4		7.9
Kent	402	6.4	76.4	
Ottawa	124	2.0	23.6	
JACKSON (1)	73	1.2		1.4
Jackson	73	1.2	100.0	
KALAMAZOO-PORTAGE (2)	178	2.8		3.3
Kalamazoo	140	2.2	78.7	
Van Buren	38	.6	21.3	
LANSING-EAST LANSING (4)	308	4.9		5.8
Clinton	21	.3	6.8	
Eaton	40	.6	13.0	
Ingham	216	3.4	70.1	
Ionia	31	.5	10.1	
MUSKEGON (2)	131	2.1		1.8
Muskegon	123	2.0	93.9	
Oceana	8	.1	6.1	
SAGINAW (1)	127	2.0		2.2
Saginaw	127	2.0	100.0	

Table II.4 Continued

WORKERS' COMPENSATION CLAIMS AND EMPLOYMENT DISTRIBUTION
BY MICHIGAN COUNTIES/GROUPED BY 1980 SMSAs

SMSA/COUNTY	WORKERS' COMPENSATION CLAIMS			1984-1986
	N	PERCENT STATEWIDE	PERCENT FOR SMSA	% OF STATE EMPLOYMENT
OTHER AREAS (60)	1259	20.1		20.3
Rural (58)	1156	18.5	91.8	
Out-of-State (1)	46	.7	3.7	
Statewide (1)	57	.9	4.5	
NO CLAIMS (2)	0	0.0		.1
Keweenaw	0	0.0	0.0	
Presque Isle	0	0.0	0.0	
TOTAL (85)	6265	100.0	---	100.2

* Percentage errors due to rounding.

AGE OF CLAIMANTS

The age of the claimant at the time the case opened was determined by subtracting the date of birth from the date of injury. The sample ranged from 14.8 to 86.5 years old, averaging 36.4 years. These ages were then grouped by decades with the following distribution.

Table II.5

<u>AGE GROUP</u>	<u>N</u>	<u>%</u>
14-24	1,078	17.4
25-34	2,086	33.6
35-44	1,469	23.6
45-54	926	14.9
55-64	601	9.7
65 +	53	0.8
TOTAL	6,213	100.0%
MISSING	52	
TOTAL SAMPLE	6,265	

GENDER OF CLAIMANTS

The gender of the claimant is requested only on the F100 Basic Report of Injury, and therefore is not available (except through conjecture based on the claimant's name) for litigated cases with no Form 100. As a result, for 62 percent of litigated cases, gender information was missing. In a nonsystematic review of the names, the pattern seemed to match the pattern evident from all cases with gender available, approximately 70 percent male and 30 percent female. This pattern is believed to reflect the relative occupational exposures of males and females in Michigan industry.

Table II.6

<u>GENDER</u>	<u>N</u>	<u>%</u>
Female	1,675	29.0
Male	<u>4,108</u>	<u>71.0</u>
TOTAL	5,783	100.0
MISSING	<u>482</u>	
TOTAL SAMPLE	6,265	

DEPENDENTS

The number of dependents is a factor in workers' compensation benefit calculations since it helps determine take-home pay upon which weekly benefit rates are based. As shown in the table, 47.8 percent of the total sample claimed no dependents. This proportion drops to 20.4 percent claiming one dependent, and gradually tapers from there.

Table II.7

<u>NUMBER OF DEPENDENTS</u>	<u>N</u>	<u>%</u>
0	2,992	47.8%
1	1,276	20.4%
2	907	14.5%
3	679	10.8%
4+	<u>409</u>	<u>6.5%</u>
TOTAL	6,263	100.0%
MISSING	<u>2</u>	
TOTAL SAMPLE	6,265	

INITIAL AVERAGE WEEKLY WAGE

A claimant's average weekly wage and number of dependents is provided by the employer to the Bureau to establish an initial benefit rate for the case. The benefit rate is determined at the time of the injury, based on the earnings at that time, and generally does not change for the duration of the disability. If a claimant returns to work for a period and later re-enters the comp system with the same disability, his or her rate is not recalculated, but is based on the original injury date. On the other hand, if a claimant is receiving a regular weekly benefit and his or her dependent level changes, the compensation rate is adjusted accordingly.

The average weekly wage for the total sample (\$398.44) is weighted in favor of unlitigated cases due to missing weekly wage information for 57 percent of litigated cases. One must also keep in mind that the sample is of "closed" cases from October 1986, thus the 1986 state average weekly wage of \$414.70 is an appropriate comparison for only 78.7 percent of the sample whose cases initiated in 1986. When recalculated according to year of injury, the adjusted expected average weekly wage for the sample becomes \$402.65, a number very close to the sample's average. How this holds up

when litigation status is taken into account will be reviewed in the evaluation section of the report.

Table II.8

<u>YEAR OF INJURY</u>	<u>TOTAL CASES</u>		<u>STATE AVERAGE WEEKLY WAGE</u>
	<u>N</u>	<u>%</u>	
1957-1969	16	0.3	NA
1970	4	0.1	\$154.59
1971	4	0.1	160.68
1972	6	0.1	168.86
1973	7	0.1	182.35
1974	14	0.2	194.34
1975	11	0.2	203.39
1976	24	0.4	214.38
1977	9	0.1	232.39
1978	31	0.5	254.79
1979	44	0.7	275.41
1980	53	0.8	298.82
1981	47	0.8	313.22
1982	91	1.5	340.45
1983	130	2.1	358.89
1984	289	4.6	370.65
1985	554	8.8	397.48
1986	<u>4,931</u>	<u>78.7</u>	<u>414.70</u>
	6,265	100.0%	\$402.65

PREVIOUS COMPENSATION PAID

When a claimant initiates a dispute by filing an F104 Petition for Hearing he/she is asked to report whether compensation has been paid previous to that filing for the named injury. Therefore, this is a question only for litigated cases with F104s. One quarter of such cases claimed they had been paid compensation for the specified injury prior to filing the F104. When the sample was evaluated by the order of forms filed, 32.4% had F101s and/or F102s filed previous to their filing an F104. The F101 is a Commencement of Payment form, the F102 Stoppage of Payment form. Seventy-one litigated cases (9.1%) did not have this information available.

B. EMPLOYERS AND INSURANCE CARRIERS

After the claimants, the other major participants in the workers' compensation experience are the employers of injured workers and their workers' compensation insurance providers. Employers are frequently represented in the workers' compensation system through their insurance companies, since the insurance provider handles the claims and has day-to-day familiarity with the system. This is not to minimize the influence of employer disability policies and safety programs on the incidence or severity of injury, but rather to recognize the limitations of information that the COMPMAS¹¹ system imposes. The focus here is on the compensation of disability claims.¹¹

This study will distinguish two major insurer types in the Michigan workers' compensation system, self-insurers and commercial insurance carriers. We will also separately tabulate the major auto companies, referred to as the "Big Three" (General Motors, Ford, and Chrysler). Although they fall within the self-insured category, they are treated as a separate group in this study because of their economic importance in the Michigan economy and because of the widespread impression that they handle workers' compensation cases differently than other employers in the state.¹²

The specific insurer IDs were compared with a listing of workers' compensation insurance providers in order to classify them as "big three," other self-insured, commercial carrier, or multiple insurer types. Other

¹¹See Habeck, Leahy, Hunt (1988) for an investigation of the ways in which employer safety practices, disability management policies, and general corporate culture influence the level of workers' compensation claims activity.

¹²An impression that was confirmed in the earlier Upjohn Institute study.

self-insurers are either large financially secure companies, or small organizations in a common industry contributing to a group self-insurance fund.

Each claimant who files can list multiple injury dates and/or employers, which in turn can result in multiple insurance carriers associated with a single claim. The maximum number of employers for any single form was five on the F104 Petition for Hearing filed by the employee, thus each case could have up to five different insurers per F104 filed, as well as any additional ones which may show up on other forms. Insurance carrier information was combined from the various BWDC forms for each case. The total portion of the sample with more than one insurer named is only 2.3 percent. There were seven cases with five insurers named, and none with more than this.

Table II.9

<u>NUMBER OF INSURERS</u>	<u>N</u>	<u>%</u>
1	6,123	97.8%
2	102	1.6%
3	22	.4%
4	11	.2%
5	<u>7</u>	<u>.1%</u>
TOTAL	6,265	100.0%

Multiple insurer types indicate a mix of insurer types, regardless of number of insurers. A case may name more than one insurer as indicated by the above table, but if they are both the same type of insurer, the case is considered to be represented by that specific type of provider and is not categorized as "multiple". As it turned out, only 39 (27.5%) of the 142 cases having more than one insurer involved more than one type. The breakdown for the total sample is as follows:

Table II.10

<u>INSURANCE TYPE</u>	<u>TOTAL IN GROUP</u>		<u>TOTAL CASES</u>		<u>TOTAL CITATIONS</u>		<u>INSURER CASE AVG.</u>
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
BIG THREE	3	0.5	556	8.9	564	8.0	188.00
OTHER SELF-INSURED	486	73.1	2,163	34.5	2,711	38.8	5.58
COMMERCIAL CARRIER	176	26.5	3,507	56.0	3,723	53.2	21.15
MULTIPLE TYPES	*		39	.6	*		*
	665	100.0%	6,265	100.0%	6,998	100.0%	10.52

* NOTE: A computer run was executed to count the total number of times each insurer type was cited. This total per insurer type was then divided by the number of insurers in this group to arrive at the average number of cases per insurer.

Following is a listing of the fifteen most frequently named workers' compensation insurance providers in the sample along with the number of cases in which they were a participant. This top 2.37 percent of the total number of insurance sources constitute almost 39 percent of all citations. The remaining 61 percent of the cases are distributed among some 300 other insurers.

Table II.11

<u>INSURANCE PROVIDER</u>	<u>INSURER TYPE</u>	<u>TOTAL CITATIONS</u>	<u>% TOTAL CITATIONS</u>
CONTINENTAL INS. CO.	CARRIER	468	6.7
GENERAL MOTORS	BIG THREE	357	5.1
MICHIGAN MUTUAL	CARRIER	244	3.5
CITIZENS INS. CO.	CARRIER	213	3.0
LIBERTY MUTUAL FIRE INS.	CARRIER	206	2.9
TRAVELERS	CARRIER	201	2.9
AETNA CASUALTY	CARRIER	145	2.1
LIBERTY MUTUAL INS. CO.	CARRIER	122	1.7
AMERICAN INT'L GROUP	CARRIER	120	1.7
EMPLOYERS INS. OF WAUSAU	CARRIER	111	1.6
INS. CO. OF NORTH AMERICA	CARRIER	110	1.6
HARTFORD ACCIDENT & INDEM.	CARRIER	109	1.6
FORD MOTOR CO.	BIG THREE	106	1.5
CITY OF DETROIT	SELF-INSURED	103	1.5
CHRYSLER CORP.	BIG THREE	101	1.4
TOP 15 IN SAMPLE (2.26%)	SEE ABOVE	2,716	38.8%

The 1978 study found significant relationships between insurer type and a number of important variables. The current evaluation will indicate whether insurance type is still a major influence as well as whether the influence has changed in any significant way.

C. WORKERS' COMPENSATION SYSTEM COMPONENTS

Finally, Bureau of Workers' Disability Compensation policies and procedures influence the process, the costs, and the final outcome of disability cases. So the Bureau itself is the third major participant in the workers' compensation system. Relevant policy questions include the following. How much lag time is there from date of application to the hearing? In disputed cases, what are the chances the claimant will receive a cash settlement, and how appropriate is the amount after considering lost work time and expense? If weekly payments or a redemption has been awarded by the Bureau, how long does the claimant have to wait before receiving payment? Are cases significantly different in outcome or cost in different regions of the state?

The specific system variables to be reviewed for their relationship to the other variables already reviewed are:

1. order of events
 - a. who files first - employer or employee
 - b. which comes first - compensation or litigation
2. timing of events
 - a. overall length of case
 - b. number and length of spells of disability benefits
3. lag time between the date of injury and:
 - a. date claimant stopped working
 - b. date disability began
 - c. date case was opened
 - d. date first payment was due

e. date first payment was actually made

System variables are likely to serve both as process and outcome variables. It is difficult to determine whether, for example, payment delays "cause" litigation or whether they are simply the result of litigation. System variables will also be reviewed in their relationship to claimant characteristics and insurer types.

The following paragraphs will present the distribution of each of the relevant system factors for the total sample. Each item's contribution toward understanding the current Michigan workers' compensation system will be covered in the evaluation section.

WHO FILES FIRST

The vast majority (91.6 percent) of workers' compensation cases begin as unlitigated claims with the filing of an F100 Employer Basic Report of Injury.¹³ Only 7.6 percent of all cases begin as litigated claims when an employee files an F104 Petition for Hearing. The remaining .8 percent begin with an employer filing an F107 Notice of Dispute. It is reassuring that such a large number of claims are acknowledged and accepted by the employer in the first instance. While it is clear that disputes can and do sometimes develop between insurer and claimant, the incidence of claims that are contested from their origin is fairly low.

¹³It is important to remember that this is a true statement for closed cases. There are "claims" that are filed that never become a BWDC case and therefore are never closed.

WHICH COMES FIRST

All but 4.9 percent of cases initiating with any of the F100-F103 basic case forms remained unlitigated. By definition, all cases initiating with an F104 are litigated. The F107s actually initiated litigation 38.5 percent of the time they were filed. Looking just at litigated cases, 39.1 percent began with forms other than the F104 Petition for Hearing, then evolved into litigation. So a majority of litigated cases were litigated from the start.

Table II.12

FIRST FORM FILED BY LITIGATION STATUS

FREQUENCY PERCENT ROW PERCENT COLUMN PERCENT	UNLITIGATED	LITIGATED	
F100-F103	5456 87.09 95.05 99.42	284 4.53 4.95 36.55	5740 91.62
F107	32 0.51 61.54 0.58	20 0.32 38.46 2.57	52 0.83
F104	0 0.00 0.00 0.00	473 7.55 100.00 60.88	473 7.55
TOTAL	5488 87.60	777 12.40	6265 100.00

LENGTH OF CASE AND NUMBER OF SPELLS

The length of a workers' compensation case obviously varies between claimants; however, it also varies within a claim depending on the

perspective: claimant, employer, insurance company, or the Bureau.

Therefore, a full understanding of time related factors requires reviewing a number of variables representing these different perspectives.

The variable LENGTH represents the span of time from when the first form was filled out by either the employer or the claimant to when the closing form was filled out, reflecting the claimant's official involvement with the case. Unofficially, the claimant may be disabled for an even longer period of time, as there is frequently a time lag between the date of the injury and the original date the first form is filed.¹⁴

The variable CASELGTH represents the span of time from when the first form was received by the Bureau, prompting them to establish a case file, and the last date a form was received by the Bureau. This span of time reflects the administrative involvement with the case. One might expect CASELGTH and LENGTH to be comparable, however, such is not the case. Very often forms filled out on a sequence of days are sent to the Bureau in a bundle, creating the appearance that the case lasted less than one week. It is for this reason that LENGTH is more often used when analyzing the interaction between variables.

Generally, within each case there are periods of time during which the claimant is receiving weekly benefits. Up to five periods of payment may be listed on any one F102 Compensation Stopped form or F103 Annual Report of Payment form. Therefore, a single F102 or F103 date proved insufficient to record total payment activity. Using the raw "From-To" payment information in the original datafile, new variables were created which measured the span

¹⁴This can be due to the 7 day waiting period, but there are frequently much longer periods of delay for reasons that are unclear.

of time between each "From-To" payment period (SPELL), in addition to overall length of time within which payments were made (first "From" and last "To" for the case).

These separate compensation payment periods, or disability spells, are defined by a gap in payment of 8 or more days between them. The number of days elapsing from when the first payment was received to the day the final payment was received, regardless of "down time" is referred to as total duration of payments (TOTDUR). The total number of days for which compensation payments were being made was summed and referred to as the total number of days compensation was paid (TDCPAY). SPELL, TDCPAY, and TOTDUR all involve periods of time during which payments were received. All are to be distinguished from the total number of days the case was open, administratively speaking (CASELGTH) and the length of the case as far as the claimant and employer are concerned (LENGTH).

To illustrate, it is possible that a claimant was disabled and received weekly compensation for a period of three consecutive weeks (thereby obviating the waiting period), went back to work for two weeks, reinjured him/herself, and again received compensation for the same original injury for another two weeks. The total payment period would then be 7 weeks, with 5 weeks of compensation, and 2 spells. Administratively, the case will have covered 7 weeks, as well.

As with any administrative system, there is a measure of waiting within any case; waiting before filing, waiting for the hearing, waiting for the decision from the hearing, and finally, waiting for the payments to begin. The various lag times within the workers' compensation system are important policy variables, but become even more interesting when reviewed in relation

to insurer and litigation status. A review of these lag times will be presented in greater detail in later sections of the report. Total sample medians for the time related variables are as follows:

Table II.13

	<u>Median In Days</u>	<u>Mean In Days</u>
LENGTH OF CASE - CLAIMANT	65	263.8
LENGTH OF CASE - ADMINISTRATION	1	162.8
TOTAL DAYS COMPENSATION PAID	31	102.3
NUMBER OF SPELLS PER CASE	1	1.25
INJURY LAG TIMES - INJURY TO:		
LAST DAY WORKED	0	16.3
DISABILITY	1	32.1
APPLICATION	13	67.2
PAYMENT LAG TIMES -		
APPLICATION TO FIRST PAYMENT	12	29.4
LAST DAY WORKED TO FIRST PAYMENT	21	38.2
PAYMENT DUE TO FIRST PAYMENT	8	19.9
TRIAL LAG TIMES -		
FIRST F104 TO PRETRIAL	116	130.1

Overall, cases closing in October 1986 ranged from 1 day to 10,547 days (28.9 years) in LENGTH with the median LENGTH being 65 days. It is interesting to note that because some cases are inordinately long, they bias the mean to 264 days (about 9 months). Because of the above mentioned practice of sending forms in batches, the average administrative CASELGTH is only 1 day (although the mean is 163 days).

A total of 280 cases received no compensation payments of any type, and were excluded from the calculation of total days compensation paid. For the remainder of the sample, the median case received payments for 31 days (the mean was 102 days). The typical workers' compensation case involves just one spell of disability (mean was 1.25 spells) and the disability begins

immediately after the injury. For the most part, it is clear that claimants come into the system, are paid benefits, and leave the system once and for all.

On the average, a total of just twenty-one days pass after the injury before payments are started. It takes 13 days for the insurer to begin the paperwork (generally notifying the Bureau of the injury) and another 8 days to generate a check. For those cases that are litigated, on the average it takes about 4 months (116 days) from the petition for hearing to the pre-trial. The means for all these timelag variables are much higher than the medians presented here, but this reflects the very strong influence of a few cases that are atypical, but involve very long delays. We will return to this story in a later section of the report.

ANALYSIS OF DATA

This section of the report will present the basic empirical analysis of the 1986 workers' compensation population in Michigan, as represented by the cases closed during the month of October 1986. It will use the variables described in the previous section to describe the basic facts about the participants, the administrative treatment, and the compensation of Michigan workers' compensation cases. The first part of this section compares litigated cases with unlitigated cases, the following part examines the outcomes for claimants in different parts of the state, and the last part reviews the experience of different insurer types.

The ideal workers' compensation system would provide medical treatment, income replacement benefits, and vocational rehabilitation services for injured workers as needed with no dispute over; (1) whether there is in fact a work related injury, or (2) who is responsible. Unfortunately, the real world does not work so neatly, and the Michigan workers' compensation system has a considerable amount of litigation. We regard litigation status as one of the major variables of empirical interest because it influences the Bureau administrative workload, and because it affects the timeliness (and possibly the adequacy) of compensation payments.

It was shown in the last part that nearly 88 percent of workers' compensation cases closed in Michigan in 1986 were unlitigated. However, the 12 percent that were litigated absorbed a much greater than proportionate share of BWDC resources. They also present the most difficult conceptual issues and hence test the system at its limits. As such, they represent one very interesting measure of the performance of the workers' compensation system itself. We will begin our analysis by reviewing the litigation experience among Michigan workers' compensation cases.

PART III. LITIGATION STATUS

The database used in this study could not directly measure the validity of a claim, the true degree of disability, nor the satisfaction of any of the participants with the outcome of the case. It does allow for direct measurement of wage replacement payments, as well as a description of when and where certain administrative treatments occurred. Perhaps the most tangible indicator of validity is the proportion of cases which are withdrawn or dismissed. It might be presumed that if there are a large number of claims being withdrawn, many of those claims were not very meritorious to begin with.

However, we will resist the temptation to overgeneralize from the empirical picture painted here. We can only presume that contending parties in litigated cases, both generally represented by counsel, have arrived at a compromise solution satisfactory to both. It is not possible to speculate on the equity or fairness of the outcome, except perhaps by comparison with the treatment of other, similarly situated claims. Thus, this analysis will stick pretty much to the facts. It is the purpose of this part to describe, using the sample of cases closed in October 1986, which claimant characteristics, insurer types, and other case attributes are most frequently associated with litigation.

Litigated cases are significantly more expensive in net indemnity costs than unlitigated cases, as shown in the table. This net indemnity measure deducts the costs of litigation, amounts reserved for future medical costs, and other such "fees" from the gross compensation received by the claimant; it represents the net compensation for the disability. The median indemnity amount received by claimants in litigated cases is more than twice as much,

and the mean is five times greater than for unlitigated cases. Clearly, the mean reflects the influence of some very large indemnity payments to litigated cases; in fact, the largest was nearly \$150,000.

Table III.1

NET INDEMNITY RECEIVED			
	<u>N</u>	<u>MEDIAN DOLLARS</u>	<u>MEAN DOLLARS</u>
LITIGATED	777	2,046	11,720***
UNLITIGATED	5,488	886	2,181

*** SIGNIFICANT AT .001 LEVEL

Table III.2 shows that these differences do not derive in a straight forward manner from the days of compensation paid. The median unlitigated case actually receives more days of compensation than the median litigated case. However, the mean number of days is far greater for litigated cases. This reflects the impact of the redemption cases that receive little or no weekly compensation benefits.

Table III.2

TOTAL DAYS COMPENSATION PAID			
	<u>N</u>	<u>MEDIAN DAYS</u>	<u>MEAN DAYS</u>
LITIGATED	538	15.5	384.0***
UNLITIGATED	5,487	31.0	74.7

*** SIGNIFICANT AT .001 LEVEL

LENGTH OF CASE

From the claimant's perspective, litigated cases last substantially longer than unlitigated cases. The table indicates that from the date of the first form that originates the case (usually either F100 filed by the employer or F104 filed by the claimant or his attorney) until the case is closed takes more than 10 times as long for the typical litigated case in Michigan. This duration is over 86 weeks for litigated claims and only 7 weeks for unlitigated claims. The means are even higher because of the impact of some of the extremely long cases; the longest duration case in the sample had a length of 1,506 weeks, or 29 years.

Table III.3

LENGTH OF CASE - CLAIMANT

	<u>N</u>	<u>MEDIAN WEEKS</u>	<u>MEAN WEEKS</u>
LITIGATED	777	86.6	143.1***
UNLITIGATED	5,488	7.4	22.8

*** SIGNIFICANT AT .001 LEVEL

These long delays are not due to slow onset of disability. Both the typical litigated and unlitigated case seem to leave work immediately upon being injured. The minor difference in the means shown in table III.6 is not statistically significant. Again, it is noted that nearly two-thirds of the litigated sample is missing on this variable, due to missing observations on last day worked. It is not clear how this might impact the measure, but it should be interpreted cautiously.

Table III.4

INJURY DATE TO LAST DAY WORKED

	<u>N</u>	<u>MEDIAN DAYS</u>	<u>MEAN DAYS</u>
LITIGATED	265	0	22.0
UNLITIGATED	5,017	0	16.0

There is a substantial difference in the time elapsed from the injury to the application for workers' compensation benefits, however. Note that this "application" could be in the form of the employer's first report of injury, (F100), or an application for hearing (F104) that indicates a disputed case. At any rate, litigated cases take substantially longer to come to fruition, five times as long for the median case, even more when the outliers are taken into account in calculation of the mean. Since the typical litigated claim in Michigan nearly always has an attorney involved, some of this time is undoubtedly spent in securing the services of a workers' compensation attorney.

Table III.5

INJURY DATE TO APPLICATION

	<u>N</u>	<u>MEDIAN DAYS</u>	<u>MEAN DAYS</u>
LITIGATED	777	63	307.9***
UNLITIGATED	5,488	12	33.1

*** SIGNIFICANT AT .001 LEVEL

The next table shows that once the workers' compensation system has determined that compensation is due, it is quite prompt in generating the

actual payment. For both litigated and unlitigated claims, the typical case is paid in 8 days. While the means reflect the impact of more unusual cases, these results also are clouded by the missing data problem. Over two-thirds of the litigated cases are missing this observation.

Table III.6

PAYMENT DUE TO FIRST PAYMENT

	<u>N</u>	<u>MEDIAN DAYS</u>	<u>MEAN DAYS</u>
LITIGATED	238	8	63.6*
UNLITIGATED	5,301	8	18.0

* SIGNIFICANT AT .05 LEVEL

COMPENSATION OUTCOME

Five compensation outcomes exist in the Michigan workers' compensation system; weekly benefits, redemption awards, a combination of the two, fees only, or no payment. This section of the report will review the outcome variable to discover what factors, if any, distinguish the likelihood of one outcome over another.

The compensation outcomes for litigated and unlitigated cases are quite distinct, as shown in the following table. Unlitigated cases are paid weekly compensation benefits, and litigated cases are generally paid lump-sums (over 90 percent of compensated claims when redemption only and combined are summed together). Just 6 percent of litigated cases are paid weekly benefits only.¹⁵ The prevalence of lump-sum payments reflects the widespread resort

¹⁵Note that this could be before the case became litigated or it could be as a result of the litigation.

to redemptions to resolve disputes in litigated workers' compensation cases in Michigan.

Table III.7

STATUS	COMPENSATION OUTCOME				TOTAL
	WEEKLY	REDEMPTION	COMBINED	WASHOUT	
LITIGATED	49 (6.4%)	249 (32.3%)	232 (30.1%)	240 (31.2%)	770 (100%)
UNLITIGATED	5448 (99.3%)	---	---	40 (0.7%)	5488 (100%)
-----	-----	-----	-----	-----	-----
TOTAL	5497 (87.8%)	249 (4.0%)	232 (3.7%)	280 (4.5%)	6258 (100%)

It is readily apparent from the compensation amounts that the various resolution methods are not equal. A redemption following weekly payments is the most expensive outcome. It is presumed that this reflects the fact that these are the most difficult and complicated cases. They are also on average the longest type of case in terms of administrative treatment. Cases resulting in multiple payment types last an average of 175 weeks, 50 percent longer than the next longest outcome method, that being redemptions only. Redemptions in turn are twice as long as weekly payment cases, fees only cases, and washouts.

Table III.8

	<u>N</u>	<u>TOTAL COST</u>	<u>AVERAGE COST</u>
WEEKLY ONLY PAYMENTS	5497 (92%)	\$13,064,951 (53%)	\$ 2,376.74
REDEMPTION ONLY	249 (4%)	2,337,397 (10%)	9,387.14
COMBINED METHODS	232 (4%)	9,098,467 (37%)	39,217.53
FEE ONLY	7 (-)	39,385 (-)	5,626.43
	<u>5985</u>	<u>\$24,540,200</u>	<u>\$ 4,100.28</u>

Multiple payment cases are also paid weekly compensation for a longer period of time. Whereas weekly only payment cases receive payments for an average of 84 days, weekly plus redemption cases receive payments for an average of 665 days. One might expect the cost in multiple payment cases to

be mostly due to the weekly benefits being paid for such a long period, but, as table III.9 indicates, this is not the case. The redemption payment amount constitutes 43% of the expense in multiple payment cases, more than the total weekly compensation payments.

Table III.9

	<u>N</u>	<u>TOTAL COST</u>	<u>AVERAGE COST</u>
COMBINED METHODS			
WEEKLY PORTION	232	\$3,274,358 (36%)	\$14,113.60
REDEMPTION PORTION	232	\$3,945,618 (43%)	\$17,007.00
FEES PORTION	232	\$1,878,491 (21%)	\$ 8,096.94
		<hr/>	<hr/>
TOTAL	232	\$9,098,467 (100%)	\$39,217.54

This brings our focus to the "extra" costs involved in disputed cases, the various fees involved in litigation. The vast majority of fees associated with litigated cases are assigned to "Other" and to attorneys' fees. "Other" includes fees such as widows' benefits, medical reimbursements, compromise payments, overpayments, redemption fees (\$100), or any other miscellaneous benefit type. Widows' benefits were paid out in only two litigated cases, both being multiple payment type cases. The seven "Fees only" cases were primarily for medical costs, where substantial amounts were reserved for future medical treatment that would be needed by the claimant.

Future medical fees constitute the highest category of costs among the litigated case fees, however, only 25% of litigated cases receive them. The fact that the highest medical fees are associated with multiple payment type outcomes (plus a considerable amount of "other" fees), indicates these cases involve claimants having severe or long-term disabilities. By established tradition and BWDC policy, lawyers receive 15 percent of a redemption award

and 30 percent of accumulated weekly benefits if weekly compensation is ordered by the Bureau.

Redemption only cases seem to involve less serious injuries. The one-quarter who receive a medical expense allotment receive significantly less than in multiple payment type cases. Plus the additional litigation expenses and "other" fees are largely processing costs rather than claimant-related expenses.

Table III.10

	N	LEGAL FEES	FILING FEES	MEDICAL FEES	"OTHER" FEES
FEES ONLY	7	\$367 (100%)	\$179 (14%)	\$1,195 (29%)	\$3,328 (100%)
MULTIPLE	232	\$3,259 (87%)	\$32 (3%)	\$3,703 (25%)	\$1,103 (94%)
REDEMPTION	249	\$1,650 (97%)	\$149 (8%)	\$2,384 (26%)	\$191 (97%)
TOTAL	488	\$1,505 (92%)	\$59 (6%)	\$1,897 (25%)	\$732 (96%)
MISSING	240 Washouts - litigated 49 Weekly only - litigated				
GRAND TOTAL	777				

* Averages are based on 777 litigated cases, percentages represent the portion of cases that received the specified fees.

TIMING OF LITIGATION

A claimant enters into litigation by filing an F104 Petition for Hearing. This is the first step for nearly 61% of cases passing through the litigation process. Only 7.5% of litigated cases did not have an F104 at any time in their administrative process. Of those cases whose claimants filed Petitions for Hearing, 77.9% filed them before receiving any compensation. About one half of these eventually became washouts, the remainder generally received redemptions.

Table III.11

LITIGATED CASES ONLY		
FIRST FORM FILED:		
F100-F103	284	(36.6%)
F107	20	(2.6%)
F104	473	(60.9%)

	777	(100.0%)
OF THOSE WITH F104:		
F104 FIRST FORM FILED:	473	(60.9%)
F104 FILED LATER IN CASE:	246	(31.7%)
NO F104 FILED:	58	(7.5%)

	777	(100.0%)
PAYMENTS BEFORE F104 FILED:		
YES	159	(22.1%)
NO	560	(77.9%)

	719	(100.0%)

INDEMNITY COSTS

For the entire sample and for the total disability duration of all closed claims, litigated cases cost insurance companies and self-insured employers \$12,367,895 in indemnity payments, 68.5% of it going directly to the plaintiff. This is an average of \$15,917.50 per litigated case. Unlitigated cases cost insurance companies and self-insured employers \$12,172,305 in awards, 98% of it going to the claimant. Unlitigated cases, then, average \$2,217.99 per case. The difference is even greater when the 240 litigated and 40 unlitigated cases that received no compensation are taken into account.

Table III.12

	TOTAL INDEMNITY	TOTAL PER CASE	(Washouts excluded) ADJUSTED TOTAL PER CASE
LITIGATED	\$12,367,895	\$15,917.50	\$23,031.46 (N ¹ = 537)
UNLITIGATED	\$12,172,305	\$2,217.99	\$2,234.27 (N ¹ = 5448)
	-----	-----	-----
TOTAL	\$24,540,200	\$3,917.03	\$4,100.28 (N ¹ = 5985)

Litigated cases make up only 12.4% of the case load in the Michigan workers' compensation system, yet they account for more than 50% of the indemnity costs paid by insurers, according to our sample.

The distinct differences between litigated and unlitigated cases remain as one reviews the specific structure of payments. Litigated cases receive more in weekly benefit payments than unlitigated cases, if they receive such payments. Thus it seems clear that the litigated cases are not just claims that are of dubious validity, they are claims where there are difficult issues that need to be resolved.

Table III.13

LITIGATION STATUS	WEEKLY BENEFIT AVERAGE AWARD	NET REDEMPTION AVERAGE AWARD	TOTAL AVERAGE AWARD
LITIGATED (777)	\$5,035.49	\$6,684.81	\$15,917.50
UNLITIGATED (5488)	\$2,180.80	----	\$2,217.99
	-----	-----	-----
TOTAL SAMPLE (6265)	\$2,534.85	\$829.07	\$3,917.03

The difference between the total average award and the sum of weekly benefits and net redemption payments are due to legal and other processing costs, and past or future medical costs. These costs are much more prevalent among litigated cases. The average difference between the total award and the indemnity benefits received by the claimant is \$4,192.24 for

litigated cases and \$37.19 for unlitigated. Unlitigated cases have associated friction costs only 3.6% of the time compared with 66.2% in litigated cases.

REPLACEMENT RATES

When examining the wage replacement rate for workers' compensation claimants, it is apparent the unlitigated claimants do substantially better. This measure is based on the ratio between the weekly compensation rate and the pre-injury average weekly wage. The litigated cases in the closed case sample experienced a median wage replacement rate of 55 percent and a mean of only 41 percent. Unlitigated claims experienced a median wage replacement rate of 62 percent and a mean of 60 percent. While the difference in mean wage replacement rate is very highly significant, it should be interpreted carefully because of the fact that over half of the litigated cases are missing from the table since they do not have a wage rate reported in the database.

Table III.14

	WAGE REPLACEMENT RATE		
	<u>N</u>	<u>MEDIAN PERCENT</u>	<u>MEAN PERCENT</u>
LITIGATED	318	55.5	40.7***
UNLITIGATED	5,487	62.2	60.0

*** SIGNIFICANT AT .001 LEVEL

The income replacement rate shows the same general pattern as the wage replacement rate, but the means are higher than the medians for both populations. This measure represents the ratio of total net indemnity

received to the estimated total potential earnings for the duration of the disability. The figures indicate that the typical workers' compensation claimant in Michigan gets 40 percent replacement of the income lost due to disability.

PART IV. LOCATION OF CLAIMS

Location refers to general SMSA groupings based on 1980 US Census Bureau definitions. The locations used are as follows:

<u>LOCATION NAME</u>	<u>COUNTIES INCLUDED</u>
1. Ann Arbor/Jackson	Jackson, Washtenaw
2. Kalamazoo/Battle Creek	Barry, Calhoun, Kalamazoo, Van Buren
3. Detroit Metro	Lapeer, Livingston, Macomb, Oakland, St. Clair, Wayne
4. Flint/Saginaw	Genesee, Saginaw, Shiawassee
5. Grand Rapids/Muskegon	Kent, Muskegon, Oceana, Ottawa
6. Lansing-East Lansing	Clinton, Eaton, Ingham, Ionia
7. All other areas	remainder of state

All of the major discrete variables which were reviewed in their relationship to these location showed significant relationships. Based on the SMSA analysis, some variables were further tested to see if the Detroit Metro location, representing one-half the sample, was significantly different than the balance of the state. In addition, litigation status within each region was reviewed to determine if the location differences could be explained by the differences between the fundamental case types.

Location and Litigation Status

Simple cross tabulations demonstrated strong relationships between litigation status and location. Although Detroit Metro represents about 50% of all cases in the sample, it has almost 67% of the litigated cases, twice the incidence as the balance of the state. Therefore, it appears that what happens in the Detroit Metro area will have a major influence on litigated statistics for the sample.

Table IV.1

TABLE OF STATUS BY LOCATION

STATUS (Litigated vs. Unlitigated)

FREQUENCY	LOCATION (Consolidated SMSAs)							
PERCENT								
ROW PCT								
COL PCT	ANN ARBOR	KALAMAZOO	DETROIT	FLINT	G.R.	LANSING-	OTHER	
	JACKSON	B.C.	METRO	SAGINAW	MUSKEGON	EAST LAN	AREAS	TOTAL
LITIGATE	40	17	520	41	58	19	82	777
	0.64	0.27	8.30	0.65	0.93	0.30	1.31	12.40
	5.15	2.19	66.92	5.28	7.46	2.45	10.55	
	15.33	5.82	16.78	10.54	8.83	6.17	6.51	
UNLITIG	221	275	2579	348	599	289	1177	5488
	3.53	4.39	41.17	5.55	9.56	4.61	18.79	87.60
	4.03	5.01	46.99	6.34	10.91	5.27	21.45	
	84.67	94.18	83.22	89.46	91.17	93.83	93.49	
TOTAL	261	292	3099	389	657	308	1259	6265
	4.17	4.66	49.47	6.21	10.49	4.92	20.10	100.00

Location and Insurer Type

As would be expected given the industrial distribution throughout the state of Michigan, the type of insurers present in the different locations are not evenly distributed. This also contributes to the distinctions between locations, though it is difficult to determine which is having the greater influence, location or insurer type. Big Three auto company insurers are concentrated in the Detroit Metro, Flint/Saginaw and Lansing/-East Lansing areas. Other Self-insurers are distributed fairly evenly throughout the balance of the state, with the possible exception of a somewhat higher concentration in the Grand Rapids/Muskegon area. Carriers follow this pattern as well with an even greater proportion in the Grand Rapids/Muskegon area.

Table IV.2

TABLE OF INSURER TYPE BY LOCATION

INSTYPE (Type of Insurance Carrier)

FREQUENCY	LOCATION (Consolidated SMSAs)							
PERCENT								
ROW PCT								
COL PCT	ANN ARBOR	KALAMAZOO	DETROIT	FLINT	G.R.	LANSING-	OTHER	
	JACKSON	B.C.	METRO	SAGINAW	MUSKEGON	EAST LAN	AREAS	TOTAL
BIGTHREE	27	4	323	125	2	67	8	556
	0.43	0.06	5.16	2.00	0.03	1.07	0.13	8.87
	4.86	0.72	58.09	22.48	0.36	12.05	1.44	
	10.34	1.37	10.42	32.13	0.30	21.75	0.64	
CARRIER	140	202	1594	172	442	141	816	3507
	2.23	3.22	25.44	2.75	7.06	2.25	13.02	55.98
	3.99	5.76	45.45	4.90	12.60	4.02	23.27	
	53.64	69.18	51.44	44.22	67.28	45.78	64.81	
MULTIPLE	1	1	25	1	4	3	4	39
	0.02	0.02	0.40	0.02	0.06	0.05	0.06	0.62
	2.56	2.56	64.10	2.56	10.26	7.69	10.26	
	0.38	0.34	0.81	0.26	0.61	0.97	0.32	
SELFINS	93	85	1157	91	209	97	431	2163
	1.48	1.36	18.47	1.45	3.34	1.55	6.88	34.53
	4.30	3.93	53.49	4.21	9.66	4.48	19.93	
	35.63	29.11	37.33	23.39	31.81	31.49	34.23	
TOTAL	261	292	3099	389	657	308	1259	6265
	4.17	4.66	49.47	6.21	10.49	4.92	20.10	100.00

What this indicates is that any statistic demonstrating a difference in the Detroit Metro region may also be interacting with the presence of Big Three insurers. A more detailed analysis of the effect of the various insurer types follows in the next section of this report.

Location and Outcome

Given the relationship between litigation status and location, it would be expected that the outcome of cases handled in the various regions will

differ along the lines of proportion litigated. Litigated cases in the Detroit Metro area and in Ann Arbor/Jackson have significantly different outcomes than litigated cases in the balance of the state. Only about 80 percent of all cases in these locations receive weekly benefits, compared with over 90 percent in all other areas.

Table IV.3

TABLE OF OUTCOME BY LOCATION

OUTCOME (Final Financial Status of Case)

FREQUENCY	LOCATION (Consolidated SMSAs)							
PERCENT								
ROW PCT								
COL PCT	ANN ARBOR	KALAMAZOO	DETROIT	FLINT	G.R.	LANSING-	OTHER	
	JACKSON	B.C.	METRO	SAGINAW	MUSKEGON	EAST LAN	AREAS	TOTAL
-----+								
FEEES_ONLY	0	1	3	0	2	0	1	7
	0.00	0.02	0.05	0.00	0.03	0.00	0.02	0.11
	0.00	14.29	42.86	0.00	28.57	0.00	14.29	
	0.00	0.34	0.10	0.00	0.30	0.00	0.08	
-----+								
MULTIPLE	17	10	125	8	22	10	40	232
	0.27	0.16	2.00	0.13	0.35	0.16	0.64	3.70
	7.33	4.31	53.88	3.45	9.48	4.31	17.24	
	6.51	3.42	4.03	2.06	3.35	3.25	3.18	
-----+								
REDEMPTION	11	4	178	10	20	3	23	249
	0.18	0.06	2.84	0.16	0.32	0.05	0.37	3.97
	4.42	1.61	71.49	4.02	8.03	1.20	9.24	
	4.21	1.37	5.74	2.57	3.04	0.97	1.83	
-----+								
WASHOUT	21	2	205	19	10	6	17	280
	0.34	0.03	3.27	0.30	0.16	0.10	0.27	4.47
	7.50	0.71	73.21	6.79	3.57	2.14	6.07	
	8.05	0.68	6.62	4.88	1.52	1.95	1.35	
-----+								
WEEKLY	212	275	2588	352	603	289	1178	5497
	3.38	4.39	41.31	5.62	9.62	4.61	18.80	87.74
	3.86	5.00	47.08	6.40	10.97	5.26	21.43	
	81.23	94.18	83.51	90.49	91.78	93.83	93.57	
-----+								
TOTAL	261	292	3099	389	657	308	1259	6265
	4.17	4.66	49.47	6.21	10.49	4.92	20.10	100.00

Although washouts constitute only 4.5% of the total sample, it is important to note that they are much more prevalent in the Detroit Metro region and in Ann Arbor/Jackson. It appears that cases in the Detroit Metro region and in Ann Arbor/Jackson are more likely to result in a redemption or a washout. This could be taken to indicate that less meritorious claims are being brought in these jurisdictions.

Location and Average Weekly Wage

The average weekly wage is very sensitive to type of industry and so is expected to show a significant relationship to location. Detroit Metro claimants earn approximately \$50 more dollars a week than their counterparts throughout the state. What is interesting is that this distinction does not hold up when litigation status is taken into account. Litigated cases are much older than unlitigated cases on the average. This in turn leads to lower average weekly wages for these cases since the benefit rate and wage level are frozen at the onset of the case. If litigation in high wage areas involves older injuries than elsewhere, this could account for the fact that litigated cases do not show the same differences in wage level as unlitigated cases.

Table IV.4

AVERAGE WEEKLY EARNINGS BY LOCATION
(in dollars)

<u>LOCATION</u>	<u>LITIGATED</u>		<u>UNLITIGATED</u>		<u>PROB> T </u>
	<u>MEDIAN</u>	<u>MEAN</u>	<u>MEDIAN</u>	<u>MEAN</u>	
ANN ARBOR-JACKSON	321.50	330.80	387.00	439.50	.022
KALAMAZOO-BATTLE CREEK	285.20	309.20	313.20	351.50	.353
DETROIT METRO	267.60	313.30	393.50	426.60	.000
FLINT-SAGINAW	190.60	249.20	424.50	464.70	.000
GRAND RAPIDS-MUSKEGON	280.20	259.30	356.90	368.20	.000
LANSING-EAST LANSING	306.60	308.55	413.30	441.50	.001
OTHER AREAS	245.50	309.40	308.70	346.10	.281
TOTAL SAMPLE	267.86	305.47	365.42	402.93	.000
DETROIT METRO		313.28		426.61***	
NON-DETROIT		295.29		381.94	

Location and Costs

The heavily industrialized regions of the state appear to bear higher average workers' compensation costs than other areas. It is important to indicate that the cost differences persist between litigated and unlitigated cases for all regions, and continue for Detroit Metro/Non-Detroit Metro comparisons, indicating that both litigation and a Detroit Metro location affect the amount of a case's total award.

Table IV.5

TOTAL AMOUNT OF AWARD BY LOCATION
(in dollars)

<u>LOCATION</u>	<u>LITIGATED</u>		<u>UNLITIGATED</u>		<u>PROB> T </u>
	<u>MEDIAN</u>	<u>MEAN</u>	<u>MEDIAN</u>	<u>MEAN</u>	
ANN ARBOR-JACKSON	10,466	25,935	1,097	2,345	.000
KALAMAZOO-BATTLE CREEK	11,054	23,146	786	2,097	.012
DETROIT METRO	2,500	12,537	929	2,279	.000
FLINT-SAGINAW	2,500	9,565	948	2,345	.003
GRAND RAPIDS-MUSKEGON	7,492	20,579	849	1,944	.000
LANSING-EAST LANSING	28,462	34,303	1,001	3,263	.001
OTHER AREAS	15,065	26,590	804	1,934	.000
TOTAL SAMPLE	4,000	18,918	892	2,218	.000
DETROIT METRO		12,537***		2,279	
NON-DETROIT		22,758		2,164	

It is very informative that litigated cases in Detroit, and also in Flint/Saginaw, are substantially less expensive. This is particularly interesting when these locations tend to be on the high side for the cost of unlitigated cases. It seems to indicate again that the litigated case population is being evaluated differently in these areas, perhaps because of the type of claims that are being brought to the system.

Location and Case Length

As has been indicated in previous sections, litigated cases are of significantly longer duration than unlitigated cases. This difference holds true for each region of the state. There is also a significant difference when comparing Detroit Metro with the remainder of the state. Detroit Metro averages about 25 fewer weeks in length for litigated cases than non-Detroit Metro areas, and only 1.7 weeks fewer in unlitigated cases, an insignificant difference.

The longest median case length for litigated cases is in the Lansing/East Lansing area, lasting 203 weeks compared with the remaining areas' 88 to 104 weeks. Unlitigated cases are longest in Ann Arbor/Jackson but by only a few weeks, all regions hovering around the 7.4 week mark. There is no obvious explanation for these differences; they may simply be due to sampling variability.

Table IV.6

LENGTH OF CASE FROM CLAIMANT PERSPECTIVE BY LOCATION
(in weeks)

<u>LOCATION</u>	<u>LITIGATED</u>		<u>UNLITIGATED</u>		<u>PROB> T </u>
	<u>MEDIAN</u>	<u>MEAN</u>	<u>MEDIAN</u>	<u>MEAN</u>	
ANN ARBOR-JACKSON	88.3	120.4	9.3	22.1	.000
KALAMAZOO-BATTLE CREEK	102.1	153.8	6.3	21.4	.000
DETROIT METRO	79.3	134.8	7.6	21.9	.000
FLINT-SAGINAW	104.3	205.5	7.9	33.1	.000
GRAND RAPIDS-MUSKEGON	95.7	144.4	7.6	21.2	.000
LANSING-EAST LANSING	203.3	214.6	8.1	31.3	.000
OTHER AREAS	101.9	155.9	6.9	20.9	.000
TOTAL SAMPLE	86.6	143.1	7.4	22.8	.000
DETROIT METRO		134.7***		21.9	
NON-DETROIT		159.9		23.6	

Location and replacement rate

Comparing wage replacement rates based on location and litigation status indicates that there is much more variability among litigated cases across the different locations. Median wage replacement rates vary only from 60 to 64 percent among unlitigated cases, but range from 22 to 62 percent among litigated cases. As discussed earlier, the missing data problem may be contributing to this confused picture. Because of this,

little credence should be given to replacement rates estimated from such small numbers of observations.

Table IV.7

REPLACEMENT RATE: COMPENSATION RATE TO WEEKLY WAGE BY LOCATION
(in percent)

<u>LOCATION</u>	<u>LITIGATED</u>		<u>UNLITIGATED</u>		<u>PROB> T </u>
	<u>MEDIAN</u>	<u>MEAN</u>	<u>MEDIAN</u>	<u>MEAN</u>	
ANN ARBOR-JACKSON	60.7	49.2	60.9	57.6	.158
KALAMAZOO-BATTLE CREEK	61.5	47.8	64.1	61.5	.132
DETROIT METRO	51.4	41.0	61.1	59.7	.000
FLINT-SAGINAW	21.4	32.0	60.9	58.0	.013
GRAND RAPIDS-MUSKEGON	53.7	35.6	62.5	58.0	.001
LANSING-EAST LANSING	21.9	27.9	61.0	58.4	.005
OTHER AREAS	59.4	42.5	64.4	62.7	.000
TOTAL SAMPLE	55.5	40.7	62.2	60.0	.000
DETROIT METRO		41.0		59.7	
NON-DETROIT		40.2		60.2	

PART V. INSURER TYPE

Carriers represented the majority of cases in the 1986 closed case sample, and they represented a majority of litigated cases as well. However, the table indicates that the Big Three insurers litigate twice as often as commercial carriers and three times as frequently as other self-insurers. All these proportions are substantial improvements over the situation in 1978, however. Cases involving multiple insurer types were all litigated, but represented just 5 percent of the litigated population and less than 1 percent of the total sample.

Table V.1

INSURER TYPE BY LITIGATION STATUS

INSURER TYPE #cases (% row) (% col)	LITIGATION STATUS		
	UNLITIGATED	LITIGATED	TOTAL
BIG THREE (100.0)	414 (74.5)	142 (25.5)	556
	(7.5)	(18.3)	(8.9)
SELF INSURED	1986 (91.8) (36.2)	177 (8.2) (22.8)	2163 (100.0) (34.5)
CARRIER	3088 (88.1) (56.3)	419 (11.9) (53.9)	3507 (100.0) (56.0)
MULTIPLE	0 (00.0) (0.0)	39 (100.0) (5.0)	39 (100.0) (0.6)
-----	-----	-----	-----
TOTAL	5488 (87.6) (100.0)	777 (12.4) (100.0)	6265 (100.0) (100.0)

Almost 87% of the Big Three litigated cases began as litigated cases, compared to only 51% for carriers and 61% for other self-insurers. It is also interesting that overall, Big Three cases have significantly more spells than other cases; but among litigated cases, Big Three cases have

significantly fewer spells than the balance of the sample. This implies that if a Big Three case is to be litigated it will be so from the very beginning. Big Three cases are also significantly longer in duration than non-Big Three cases. The table shows that Big Three litigated cases are about one-third greater in length and unlitigated cases are more than twice the length. Presumably, this reflects the number of spells and the "down-time" between spells for the Big Three cases, but there is no obvious explanation for the difference in the number of spells.

Table V.2

	NUMBER OF SPELLS		LENGTH OF CASE		F104 FIRST FORM	
	UNLITIGATED	LITIGATED	UNLITIGATED	LITIGATED	NUMBER	Z
BIG THREE	1.82	1.33	382.38	1247.39	123	86.7
OTHER	1.16	1.61	141.24	946.40	350	55.1
TOTAL SAMPLE	1.21	1.57	159.43	1001.40	473	60.9
PROB > T	.0001	.0112	.0001	.0108		.0000

Another interpretation of fewer spells is that even though the cases are longer in length, Big Three insurers do not pay out anything until the end of the cases because more of the cases are redeemed. A test of the order in which forms were filed by insurer type supports this notion. If a Big Three case is in litigation, it is likely that no monies were paid out prior to the litigation process.

Table V.3

INSURER TYPE BY ORDER OF PAYMENT
Litigated cases only

	NO PAYMENT		PREVIOUS PAYMENT		TOTAL
BIG THREE INSURER	123	(92.48)	10	(7.52)	133
		(25.79)		(4.37)	(18.84)
OTHER SELF INSURED	109	(67.28)	53	(32.72)	162
		(22.85)		(23.14)	(22.95)
COMMERCIAL CARRIER	216	(57.75)	158	(42.25)	374
		(45.28)		(69.00)	(52.97)
MULTIPLE INSURERS	29	(78.38)	8	(21.62)	37
		(6.08)		(3.49)	(5.24)
TOTAL	477	(67.56)	229	(32.44)	706
MISSING					71
GRAND TOTAL					777

As for outcome, Big Three insurers do make use of redemptions, but not to the degree expected. The average number of spells in Big Three litigated cases is lower than its counterparts primarily because Big Three insurers find that over 50% of their litigated cases are withdrawn or dismissed. Other self insurers washout 29% of their litigated cases, carriers 25%. Redemptions account for only 35% of Big Three insured litigated cases compared with 61% of other self insurers and 71% of commercial carrier litigated cases.

Table V.4

INSURER TYPE BY OUTCOME
Litigated cases only

INSURER TYPE	OUTCOME					
Frequency						
Row Percent						
Column Percent	Weekly only	Redemption	Combined	Fees only	Washouts	TOTAL
-----	-----	-----	-----	-----	-----	-----
BIG THREE	18	41	9	1	73	142
	12.68	28.87	6.34	.70	51.41	
	36.73	16.47	3.88	14.29	30.42	18.28
SELF INSURED	14	55	53	3	52	177
	7.91	31.07	29.94	1.69	29.38	
	28.57	22.09	22.84	42.86	21.67	22.78
CARRIER	15	134	163	3	104	419
	3.58	31.98	38.90	.72	24.82	
	30.61	53.82	70.26	42.86	43.33	53.93
MULTIPLE	2	19	7	0	11	39
	5.13	48.72	17.95	0.00	28.21	
	4.08	7.63	3.02	0.00	4.58	5.02
=====	=====	=====	=====	=====	=====	=====
TOTAL	49	249	232	7	240	777
	6.31	32.05	29.86	0.90	30.89	100.00

INSURER TYPE AND COSTS

Big Three insurers accounted for \$3,262,325 (13.3%) in total indemnity costs, Other Self-Insurers \$6,790,160 (27.7%), Carriers \$14,133,513 (57.6%) and Multiple Insurer types \$354,202 (1.4%). As mentioned before, all multiple insurer type cases are litigated, totalling less than 2% of all costs. Unlitigated cases account for 63.2% of Big Three insurer costs compared to 58.9% of other self insurers and 43.3% for carriers. Over half of all carrier indemnity costs are in litigated cases yet litigated cases are only 12% of the carrier caseload (excluding medical only cases). By sharp contrast, 25.5% of Big Three cases are litigated, but these result in less than 10% of their indemnity costs. Other self insurers are closer to commercial carriers in that 8.2% of their cases are

litigated, but cost the insurers 41.1% of all indemnity payments. Thus it appears that although the Big Three insurers are involved in the litigation process more frequently, it does not necessarily cost them more money.

Table V.5

INSURER TYPE BY LITIGATION STATUS			
	UNLITIGATED	LITIGATED	TOTAL
BIG THREE	\$2,062,107 (63.2) (16.9)	\$1,200,218 (36.8) (9.7)	\$3,262,325 (100) (13.3)
SELF INSURED	\$3,997,904 (58.9) (32.8)	\$2,792,256 (41.1) (22.6)	\$6,790,160 (100) (27.7)
CARRIERS	\$6,112,300 (43.3) (50.2)	\$8,021,213 (56.8) (64.9)	\$14,113,513 (100) (57.6)
MULTIPLE	0 (0.0) (00.0)	\$354,202 (100) (2.9)	\$354,202 (100) (1.4)
TOTAL	\$12,172,311 (49.6) (100.0)	\$12,367,889 (50.4) (100.0)	\$24,540,200 (100) (100.0)

Litigated cases involving more than one insurer type have the greatest non-claimant costs. A total of 42.4% of the indemnity distributed in these type of cases went for associated legal, processing, future medical and "other" fees. Big Three insurers spent 35.9% of their litigated costs in fees. The remaining sample spent 25% on these friction costs.

Carriers spend the greatest proportion in redemptions of all insurer types. Actually, 70.9% of their litigated cases involve a redemption for all or part of the award. In total this constitutes 46.3% of the indemnity costs for these cases. Big Three insurers use redemptions in 35.2% of their litigated cases constituting 26.2% of their litigation indemnity expenses.

The following table illustrates quite clearly the sharp difference between the Big Three insurers and all other insurer types. Whereas other insurer types use redemptions in 60 to 70% of their litigated cases, Big Three insurers do so in only 35% of all their litigated cases. This is partly the result of the prevalence of washouts among Big Three insurers, but there appear to be very significant differences among these case populations. In terms of the proportion of all indemnity costs, only 26 percent of Big Three indemnity dollars find their way into net redemption payments, whereas 37 percent and 46 percent of other self-insurers and carrier dollars do so.

Table V.6

Litigated cases only

FREQUENCY ROW PERCENT COLUMN PERCENT	INSURER TYPE BY PAYMENT TYPE							
	WEEKLY		REDEMPTION		FEES		TOTAL	
	\$ AMOUNT	N	\$ AMOUNT	N	\$ AMOUNT	N	\$ AMOUNT	N
BIG THREE	\$ 455,814	[27]	\$ 314,039	[50]	\$ 430,365	[62]	\$ 1,200,218	[142]
	38.0	19.0	26.2	35.2	35.9	43.7	100	100
	11.6	9.6	6.0	10.4	13.2	12.1	9.7	18.3
SELF INSURER	\$1,086,864	[67]	\$1,028,234	[108]	\$ 677,158	[117]	\$ 2,792,256	[177]
	38.9	37.8	36.8	61.0	24.2	66.1	100	100
	27.8	23.8	19.8	22.5	20.8	22.8	22.6	22.8
CARRIERS	\$2,300,342	[178]	\$3,717,213	[297]	\$2,003,658	[307]	\$ 8,021,213	[419]
	28.7	42.5	46.3	70.9	25.0	73.3	100	100
	58.8	63.4	71.6	61.7	61.4	59.7	64.9	53.9
MULTIPLE	\$ 69,556	[9]	\$ 134,610	[26]	\$ 150,036	[28]	\$ 354,202	[39]
	19.6	23.1	38.0	66.7	42.4	71.8	100	100
	1.8	3.2	2.6	5.4	4.6	5.4	2.9	5.0
TOTAL	\$3,912,576	[281]	\$5,194,096	[481]	\$3,261,217	[514]	\$12,367,889	[777]
	31.6	36.2	42.0	61.9	26.4	66.2	100	100
	100	100	100	100	100	100	100	100

* Sum of N across rows will exceed total due to individual cases which receive more than one payment type. Refer to insurer type by outcome table.

INSURER TYPE AND CLAIMANT CHARACTERISTICS

There is a significant difference in average weekly wages earned by the claimants of litigated cases compared to that of unlitigated cases. This is true for each insurer type. However, when these wages are compared to the state average weekly wage for the year of injury, it turns out there is no significant difference for any insurer between wages earned by litigated claimants and those earned by unlitigated claimants. In other words, all the wage differences are due to the age of the case.

It would appear that Big Three claimants have a greater chance of recouping a low proportion of lost wages, given their average wage consistently exceeds the state average on which the maximum benefit standard is based. For unlitigated cases, the average claimant from the Big Three was earning nearly 170 percent of the state average weekly wage at the time of the injury. Since maximum benefits are limited to 90 percent of the state average weekly wage, clearly these claimants experience a lower benefit relative to their earnings than other claimants.

Table V.7

CLAIMANT AVERAGE WEEKLY WAGE BY INSURER TYPE

	<u>UNLITIGATED</u>	<u>%SAWW</u>	<u>LITIGATED</u>	<u>%SAWW</u>	<u>PROB > T </u>	
BIG THREE	\$674.92	169.7	\$390.50	157.3	.0001	.4593
SELF INSURED	\$401.52	97.8	\$319.20	98.0	.0002	.9729
CARRIER	\$367.38	89.5	\$315.14	89.5	.0003	.99**
TOTAL	\$403.22	98.5	\$309.45	97.4	.0001	.7868

Timing may also be a factor. If it takes longer for unlitigated carrier claimants to start receiving funds, even if the weekly benefit is

more adequate relative to previous earnings, the overall replacement rate will be poorer.

Table V.8

LENGTH OF CASE AND PAY LAG BY INSURER AND STATUS
(in weeks)

	UNLITIGATED		LITIGATED		PROB > T	
	<u>LENGTH</u>	<u>PAYLAG</u>	<u>LENGTH</u>	<u>PAYLAG</u>	<u>LENGTH</u>	<u>PAYLAG</u>
BIG THREE	54.63	.52	178.20	118.09	.0001	.0041
SELF INSURED	19.30	2.43	146.67	28.54	.0001	.0045
CARRIER	20.74	4.04	126.26	10.93	.0001	.0023
TOTAL	22.78	3.18	143.06	25.93	.0001	.0001

This is exactly what is happening in unlitigated carrier cases. Claimants are having to wait an average of four weeks from date of first application to date of first payment in such cases. Big Three unlitigated claimants wait less than one week by contrast. Other self-insured claimants fall in between.

The experience is reversed in litigated claims. Carrier claimants wait only an average of 11 weeks from date of application to date of first payment for litigated cases. Big Three insurers average 2.27 years before first payment is received. This discrepancy reflects the difference in award structure. Carriers use weekly benefits along with redemptions, six times more often than the auto industry insurers do, thereby awarding a portion of the total sooner on an incremental basis. The automotive industry insurers are more likely to pay out nothing until the final redemption decision is made.

INSURER TYPE AND WAGE REPLACEMENT RATE

Overall, about 60% of lost wages are compensated in Michigan's workers' compensation disability benefit system. The replacement rate is slightly less for litigated cases, about 40% on average.¹⁶ However, there are major differences between replacement rates depending on the insurance source.

Table V.9

WAGE REPLACEMENT RATE AND INSURER

		BIG THREE	SELF INSURED	CARRIER		TOTAL
LITIGATED		23.3	44.4	43.3		41.2
UNLITIGATED		49.0	60.3	61.3		60.0

PROB > T		.0001	.0001	.0001		.0001

Unlitigated carrier cases have the best showing for wage replacement rate, with other self-insured cases a close second. Unlitigated Big Three cases average only 49% wage replacement because of the high wage levels paid in the auto industry. Big three litigated cases show even more of a disadvantage in wage replacement rate when compared to other insurers. On the average, only about one-fourth of the pre-disability earnings level is replaced for Big Three litigated cases. Unfortunately, these results are somewhat clouded by a serious missing data problem. Approximately 50 percent of litigated carrier cases, 60 percent of litigated self insured

¹⁶Note that these figures for the mean replacement rate are higher than those for the medians given earlier.

cases and 80 percent of the Big Three litigated cases did not report weekly earnings, so replacement rates could not be calculated.

PART VI. SUMMARY AND CONCLUSIONS

This report has sought to provide an empirical description of the Michigan workers' compensation system through an analysis of the 6,265 cases closed in October 1986. The official database of the Bureau of Workers' Disability Compensation (COMPMAS^T) was used to select the one month slice-in-time sample. Information was abstracted from individual form files within COMPMAS^T and an analytical data file on each claim was built using the Statistical Analysis System (SAS).

This data set was analyzed in such a way as to maximize the comparability with the closed case survey done by the W. E. Upjohn Institute for Employment Research in 1978. The comparison of the closed case population in 1978 with that in 1986 should make possible some evaluation of the impact of the workers' compensation reforms of the early 1980's.

The major focus of the analysis is on the influence of litigation, location, and insurer type on case outcomes and the replacement rates realized by claimants in the system. In addition, careful analytical attention has been paid to the timeliness issues. This research strategy reflects the judgment that the adequacy of income replacement and its timeliness are the two most important characteristics of a workers' compensation system.

Indemnity payments to the 6,265 cases closed in October 1986 totalled about \$24.5 million over the duration of the cases. Thus, the typical workers' compensation case that received indemnity cost about \$4,000 in 1986. Weekly benefit payments accounted for 65 percent of all indemnity. Of the 35 percent of indemnity paid in lump-sums (\$8.6 million), 40 percent

went for friction costs (those costs that must be incurred in order to qualify for benefits, such as attorney fees, medical costs, and other fees of litigation) and 60 percent was received by claimants as compensation for lost wages. Nearly 8 percent of all cases received lump-sum payments in 1986, and virtually all of these were litigated claims.

Approximately 12 percent of all closed claims in the sample were litigated and these litigated cases received about half of all indemnity payments. After deduction of the very substantial friction costs associated with securing these benefits, the average claimant in a litigated case realized nearly \$12,000 in compensation. For unlitigated cases, the net indemnity averaged about \$2,000.

Two different measures of replacement rates were used in the study. One compared the weekly compensation rate to the average weekly earnings before disability and was called the wage replacement rate. The median wage replacement rate for the sample was 62 percent, with unlitigated cases realizing 62 percent while litigated cases realized 55 percent. The arithmetic means were lower, with unlitigated cases averaging 60 percent and litigated cases 41 percent in wage replacement.

To estimate income replacement rates, it was necessary to assume that the claimants had earned nothing at all during their period of disability (as measured by case length), and that in the absence of the disability they would have continued to earn at the pre-injury average wage for the duration. Given these assumptions, the median case achieved about 40 percent income replacement from the workers' compensation system in 1986. There was no difference between litigated and unlitigated cases in this measure, a very surprising finding. Mean income replacement rates were

substantially higher, with an overall average of 65 percent. This varied from 66 percent for unlitigated cases to 58 percent for litigated cases (not a statistically significant difference).

One cautionary note was that these calculations were subject to a very substantial missing data problem for litigated cases. Replacement rates could not be calculated for over half of the litigated cases due to missing data, usually on pre-injury earnings. Nevertheless, the conclusion is that the results for replacement rates seem to validate the litigation process in Michigan workers' compensation. For the median case, the litigation process seems to provide virtually the same income replacement rate as for unlitigated cases.

The timeliness issues were analyzed in various ways. First, the total length of the disability was calculated as extending from the date on the first form filed in the case (generally either the employer's report of injury or the claimant's petition for hearing) to the date of closure. In litigated cases, this means that the duration of disability is being measured from the date the claimant took some action to secure compensation, rather than from the date of injury. For the total sample, the median length of case was 65 days, including 21 days from the injury to the first payment. Given the 7 day waiting period before workers' compensation income replacement benefits are payable, 21 days from injury to first payment seems to be a very good performance.

For unlitigated cases, the median total length of case was 7.4 weeks (or 52 days), with a mean of 22.8 weeks. The mean is substantially higher than the median for this measure because of the impact of a small number of extremely long cases (one case had a length of 29 years) on the mean.

As would be expected, litigated cases demonstrated substantially longer durations. The median length of case for litigated cases in the sample was 86.6 weeks, just over 1.6 years, while the mean was 143.1 weeks, or over 2.7 years. Since so many of these cases end with a redemption settlement, most of this time would seem to be "waiting" time. As such, it seems to be excessive.

Analysis of closed workers' compensation cases by location within the state revealed the difficulty of disentangling the influences of industry and location. Detroit consistently looks different from other parts of the state, but this is partly a result of the concentration of Big Three cases in the Detroit Metro area. It appears that litigated cases in the Detroit area are significantly less meritorious on the average. This is indicated by the higher washout rate and substantially lower average compensation levels.

Insurers were divided into three categories, Big Three self-insured, Other self-insured, and Carrier. The analysis indicated that the Big Three were two to three times as likely as other insurers to experience litigated claims, and that this was most likely to occur from the beginning of the claim. It was also apparent that Big Three litigated cases were much less likely to have received any payments previous to litigation.

This excess activity in litigated cases for the Big Three was manifested in a washout rate of almost double that of other insurers. At the same time, the Big Three used redemption settlements in considerably fewer cases. It is not clear how the dynamics of claimant behavior and insurer behavior are interacting to cause these very substantial differences.

Replacement rates are substantially lower for Big Three cases, both litigated and unlitigated, than for other insurers. For unlitigated cases, wage replacement rates are about 50 percent for the Big Three and 60 percent for other insurers. Litigated cases reveal replacement rates in the 25 percent range for Big Three and 45 percent range for other carriers. This reflects both the effect of the maximum benefit rate on the high wage levels of auto workers and the heavy activity in litigated cases just discussed.

"INTRASTATE DIFFERENCES IN WORKERS' COMPENSATION COSTS"

A RESEARCH PROPOSAL TO THE BUREAU OF WORKERS' DISABILITY COMPENSATION MICHIGAN DEPARTMENT OF LABOR

submitted by
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OBJECTIVES OF THE RESEARCH

Anecdotal evidence suggests that by emphasizing policies that encourage cooperation and facilitate an early return to work after injury, some employers are greatly reducing their workers' compensation costs. This project is designed to probe the differences among employers in the incidence of workers' compensation claims and the cost of those claims.

In particular, the research proposed herein is designed to provide answers to the following questions:

1. Are there significant differences in the cost of workers' compensation or the incidence of workers' compensation claims among employers (and/or different plants of the same employer) doing similar work?

2. What are the factors that cause (or at least correlate with) these differences in experience? To what degree does the regional location within Michigan contribute? What is the role of employer policies with regard to labor relations, claims handling, rehabilitation, or other similar areas? What environmental factors appear to be important in determining workers' compensation experience?

3. To what extent are these causative factors affected by employer, union, or public policies? Are there policy initiatives that could assist employers in reducing the cost of workers' compensation without adversely impacting their workers?

A multivariate statistical analysis will be performed to isolate the causes of these differences. Interviews with both employers and claimants will be conducted to validate the results of the statistical analysis and to gather information that is unique to the environment of the plant.

In addition, the data base accumulated for the study will make possible a broad scale empirical analysis of the Michigan workers' compensation system. One particular focus of this analysis will be on changes in Michigan's workers' compensation system since 1978. By matching the new data base to that collected by the Upjohn Institute in 1978, it will be possible to compare the output of the workers' disability compensation system in October 1986 with that of October 1978. In this way an assessment of the aggregate impact of the legislative and administrative reforms of the last 7 years can be made.

PART I. PRELIMINARY ANALYSIS

TASK 1 ANALYSIS OF CLAIMS INCIDENCE FOR 1986

The first task will be to secure from the Bureau of Workers' Disability Compensation (BWDC) a data base on magnetic tape that includes all workers' compensation claims closed during 1986. Closed cases are to include all cases with Forms 102, 113, 200 or 501. Date of "Closure" will refer to the date of the final BWDC Form which actually prompts the Bureau to retire the case.

It is anticipated that this data base will include approximately 100,000 closed cases from the COMPMASST data system. No detailed claim data will be developed at this point. The Department of Labor will provide a listing of 1986 litigated and unlitigated closed claims which will include date of injury, social security number, employer code, the county of origination, the date of closure, and a list of the forms present for each claim.

A preliminary analysis will be conducted on this data base to determine the number of WC claims (both litigated and unlitigated) by employer and by county during 1986. Employers will be identified by Federal taxpayer ID (per current BWDC practice) and ranked according to the total number of cases closed during 1986.

In addition, an attempt will be made by BWDC to estimate the total 1986 workers' compensation indemnity costs by employer. This will provide an alternative measure of the range of employer

experience with the workers' compensation system in Michigan. If this turns out to be feasible, it may be substituted for the claims incidence variable as a discriminator among employers. It will be interesting to compare the differences in benefit costs with those in the incidence of claims.

Estimated duration of Task 1 = 4 weeks

Approximate level of effort

Principal Investigator - 3 days

Research Assistance - 5 days

Clerical Support - 2 days

TASK 2 DETERMINATION OF RELATIVE CLAIMS INCIDENCE IN 1986

It will then be necessary to match the employers to some other data base to secure information on industry (SIC classification) and employment level. This is required in order to reach a judgment on the relative incidence of WC claims. It will be the responsibility of BWDC to secure access to a suitable data base for this purpose (probably from MESC or Department of Treasury). The raw number of claims will be divided by the employment level of the firm, and compared to the expected accident rate or claims rate in the industry of the employer. Typical industry accident rates are already known from OSHA and MIOSHA data. Thus, employers can be judged to be either above or below average in claims activity for their industry and their employment level.

The output from this analysis will be a rank ordered list of employers according to relative (or normalized) claims incidence among the 1986 WC closed case population. Such a list will be of interest in itself, but more importantly, it will provide the means to select individual employers for the follow-up interviews described in TASK 5 below. Given the expected rate of approximately 25 WC case closures per 1000 employees per year, such estimates should be quite reliable for all employers with more than about 500 employees.

Estimated duration of Task 2 = 2 weeks

Approximate level of effort

Principal Investigator - 2 days

Research Assistance - 10 days

Clerical Assistance - 1 day

PART II. BASIC DATA ACCUMULATION

There will be four separate tasks associated with the data accumulation phase of the research.

TASK 3 DEVELOP A TYPOLOGY FOR STRATIFIED SAMPLING

A data base will be secured from BWDC that consists of all cases closed in October 1986. Complete details available from the COMPMASST data system will be provided on magnetic tape in mutually agreeable format. Then, a typology for BWDC cases will be developed by the Upjohn Institute that will guide the collection of supplemental data from BWDC files on a sample of closed cases of particular policy significance. It will be necessary to engage in close consultation with BWDC personnel in the development of this typology.

In addition, a sampling design based on this typology will be developed to maximize the efficiency of the supplemental data gathering effort [TASK 4]. This is necessary because some of the cases of most interest to policymakers occur with very low frequency and will not turn up in a simple random sample. The full October 1986 sample will be used to develop separate sampling frames for each type of case. A series of sub-samples will be drawn from the October 1986 closed case population as dictated by the case typology and statistical reliability requirements. Each sub-sample will represent a particular type of workers' compensation case as developed in the typology.

Estimated duration of Task 3 = 2 weeks

Approximate level of effort

Principal Investigator - 5 days

Research Assistance - 5 days

Clerical Support - 2 days

TASK 4 ABSTRACT SUPPLEMENTAL DATA FROM BWDC FILES

Supplemental data will be abstracted from BWDC files on these sub-samples of cases of different types to complement the information available from COMPMASST on the specific facts about the disability and the claimant. Special attention would be concentrated on items not available in COMPMASST, such as the nature of injury, the previous level of earnings, reasons for reduced compensation rate, probable retiree status, etc.

This effort will be handled much like the abstracting that was done by the Upjohn Institute in 1978, but the amount of information required will be much less since the basic facts of

the case will already be known from COMPMAS^T. This work will be done on BWDC premises with files to be recalled from the State Records Center by the Bureau. A list of the desired case files will be supplied by the Upjohn Institute well in advance of the beginning of the abstracting effort, to insure that recalling the files will not disrupt normal Bureau paper flow. It is planned that about 1,000 cases will be abstracted in this way.

Estimated duration of Task 4 = 4 weeks

Approximate level of effort

Principal Investigator - 15 days

Research Assistance - 5 days

Clerical Support - 30 days

TASK 5 CONDUCT INTERVIEWS WITH ATYPICAL EMPLOYERS

A major data collection task will consist of conducting face to face interviews with employers who are identified in the preliminary analysis [TASK 2] as outliers in either closed claim frequency (i.e. either very frequent or very infrequent users of the WC system) or WC benefit payments for their employment level and industry.

Approximately 40 structured interviews will be conducted to provide representation of the different parts of the state and the major industries within Michigan. This will optimize the policy relevance of the findings. However, since the rate of case closures will vary substantially, it is anticipated that information on small employers or those in industries with infrequent WC claims will be less reliable than for larger employers.

Information on such qualitative factors as labor-management relations climate, employee involvement or quality of worklife programs, joint union-management safety committees, or other potentially significant influences on claims incidence and workers' compensation costs will be developed. Special effort will be made to identify employers that are engaging in "disability management" efforts of one type or another.

Estimated duration of Task 5 = 4 weeks

Approximate level of effort

Principal Investigator - 15 days

Research Assistance - 20 days

Clerical Support - 10 days

TASK 6 INTERVIEWS WITH CLAIMANTS

To provide validation of any judgments about environmental differences and policy differences among employers in Task 5, telephone interviews with approximately 400 workers' compensation claimants from among the employees of the 40 firms will also be conducted. The feelings of the claimants about their workers' compensation experience, the performance of BWDC personnel, insurance carriers, medical treatment personnel, and the attitudes exhibited by representatives of their own employer will be probed. Disability management policy differences among employers should be apparent in the attitudes of their employees after they have experienced a period of disability.

Estimated duration of Task 6 = 5 weeks

Approximate level of effort

Principal Investigator - 10 days

Research Assistance - 50 days

Clerical Support - 5 days

PART III. DATA ANALYSIS AND FINAL REPORT

Based on the work carried out in the stages outlined above, three further analytical tasks will be carried out.

TASK 7 GENERAL DATA ANALYSIS FOR POLICY INTEREST

Analysis of all data collected will be conducted to develop information about current experience with program elements such as coordination of benefits, the inflation supplement fund, the definition of disability, adequacy of the benefit formula, and other policy issues. This analysis will utilize the October 1986 closed case data base as developed from COMPMAS^T, the special supplementary information gathered from the subsamples of October 1986 closed cases, and information garnered from the employer and claimant interviews based on closed claim incidence.

Estimated duration of Task 7 = 4 weeks

Approximate level of effort

Principal Investigator - 10 days

Research Assistance - 20 days

Clerical Support - 5 days

TASK 8 DETERMINE CHANGES IN WC POPULATION SINCE 1978

In addition, a simple random sub-sample of cases closed in October 1986 will be drawn to match up against the 1978 Michigan Closed Case Survey (MCCS) to assess how much change has occurred in the WC population in the last 8 years. This will require building a parallel data base to the existing MCCS data base and conducting comparative analyses of both. The major focus will be on those items reported in Workers' Compensation in Michigan: A Closed Case Survey, published by the Upjohn Institute in 1982. Numerous hypotheses about improvements in administrative processing time, income replacement benefit adequacy, and changes in insurer behavior can be tested in this way.

Estimated duration of Task 8 = 4 weeks

Approximate level of effort

Principal Investigator - 10 days

Research Assistance - 20 days

Clerical Support - 5 days

TASK 9 INTEGRATE ANALYSES, WRITE FINAL REPORT

Finally, the completed analytical data base will be used to estimate the impact on the WC case population and on the likelihood of litigation of various employer, employee, and environmental factors. The special focus will be on differences between parts of the state and explaining reasons for these differences. This will require adding information about local labor markets and other environmental variables to the data on WC cases. The qualitative information derived from employer and employee interviews will be used to inform the larger effort and penetrate beyond those factors that are more easily quantified.

The result of this analysis will be a description of the determinants of WC case activity in Michigan. Policy implications of the research will be developed in a final written report to the Bureau of Workers' Disability Compensation. The Upjohn Institute will retain the copyright for publication, but the State of Michigan will have the right to utilize the report in any way it sees fit.

Estimated duration of Task 9 = 6 weeks

Approximate level of effort

Principal Investigator - 30 days

Research Assistance - 15 days

Clerical Support - 15 days

MANAGEMENT AND PERSONNEL

It is estimated that this project can be accomplished in 7 months, provided there are no long delays associated with securing the match of the BWDC records with other records described in TASK 2. It will involve approximately 100 days of Principal Investigator time, 150 days of Research Assistance, and 75 days of Clerical Support.

The abstracting of data from BWDC files will be done by people experienced with BWDC records and acceptable to the Bureau. The field interviews of employers and the telephone interviews with claimants will be subcontracted with another organization. The Upjohn Institute will provide design, training, and supervision for all data collection efforts and will be responsible for the performance of all project elements.

It should be noted that the project description provided above is subject to refinement as the study proceeds. There are a number of design choices that will have to be made as the information becomes available. This is a natural consequence of the originality of the project and the existing uncertainty about what will be encountered. It is agreed that the Bureau of Workers' Disability Compensation will be consulted by and will participate with the Upjohn Institute in making these tactical decisions as the study progresses.

Dr. H. Allan Hunt will serve as the Principal Investigator and Project Director. Overall management and financial control of the project will be provided by the W. E. Upjohn Institute for Employment Research, Dr. Robert G. Spiegelman, Executive Director. This includes responsibility for performance of all tasks, providing appropriate quality control, communicating with the sponsoring agency, guaranteeing financial accountability, and delivering the final report in a timely manner. The Upjohn Institute expects to cost-share with an external sponsor in the support of this effort.

ESTIMATED TIMETABLE AND LEVEL OF EFFORT

task	days of effort			duration	comment
	PI	RA	Cler		
1	3	5	2	4 weeks	BWDC will need to try to estimate costs of WC
2	2	10	1	2 weeks	Assuming no MESC delays
3	5	5	2	2 weeks	With BWDC collaboration
4	15	5	30*	4 weeks	Abstracting at BWDC
5	15	20*	10	4 weeks	Field expenses \$3,000
6	10	50*	5	5 weeks	Telephone interviews
7	10	20	5	4 weeks	Basic data analysis
8	10	20	5	4 weeks	Match to MCCS data
9	30	15	15	6 weeks	Final report
total	100	150	75	35 weeks	Total elapsed time will be less due to overlap

* Subcontracted tasks

PI 80 days @ \$350 = \$28,000 @ 50% \$14,000
 20 days @ \$250 = \$5,000 @ 100% \$5,000

RA 80 days @ \$150 = \$12,000 @ 50% \$6,000
 20 days @ \$150 = \$3,000 @ 100% \$3,000
 field interviews n=40
 50 days @ \$100 = \$5,000 @ 100% \$5,000
 telephone interviews n=400

Clinical 50 days @ \$125 = \$6,250 @ 50% \$3,125
 25 days @ \$100 = \$2,500 @ 100% \$2,500
 \$38,625

Other Costs

Field Survey Expenses (^{\$100}per diem + ^{\$50}mileage) \$3,000
 Telephone Survey Expenses (^{\$10}telephone, forms, etc.) \$4,000
 Computer costs \$2,500 ?

Telephone, Supplies, miscellaneous \$1,000

Upjohn Institute contribution

\$49,125

23,125

\$72,250